DOCUMENT RESUME

ED 469 202 CG 031 966

AUTHOR	Johnston, Lloyd D.; O'Malley, Patrick M.; Bachman, Jerald G.
TITLE	Monitoring the Future National Survey Results on Drug Use, 1975-2001. Volume II: College Students & Adults Ages 19-40, 2001.
INSTITUTION	Michigan Univ., Ann Arbor. Inst. for Social Research.
SPONS AGENCY	National Inst. on Drug Abuse (DHHS/PHS), Bethesda, MD.
REPORT NO	NIH-02-5107
PUB DATE	2002-08-00
NOTE	250p.; Written by the Monitoring the Future Project. For volume I, see CG 031 965.
CONTRACT	3-R01-DA-01411
AVAILABLE FROM	Monitoring the Future, Institute for Social Research, University of Michigan, 426 Thompson St., Room 2311, Ann Arbor, MI 48106-1248. Tel: 734-763-5043; Fax: 734-936-0043; E-mail: MTFinfo@isr.umich.edu; Web site: http://monitoringthefuture.org/ .
PUB TYPE	Numerical/Quantitative Data (110) -- Reports - Research (143)
EDRS PRICE	EDRS Price MF01/PC11 Plus Postage.
DESCRIPTORS	Attitudes; Beliefs; College Students; Dropouts; Higher Education; *Illegal Drug Use; *Longitudinal Studies; Sociocultural Patterns; *Substance Abuse; Trend Analysis; *Young Adults
IDENTIFIERS	*Monitoring the Future

ABSTRACT

This is the second volume in a two volume set covering research conducted as part of the Monitoring the Future study of young adults. It presents the results of the 1977 through 2001 follow-up surveys of the graduating high school classes of 1976 through 2000 as these respondents have progressed from college into adulthood. In order for this volume to stand alone, some material has been repeated from volume 1. Specifically, chapter 2 is repeated from volume 1, and provides an overview of the key findings. Chapter 3, on study design and procedures, is also repeated. Chapter 4 examines the prevalence of drug use in early and middle adulthood, and chapter 5 presents trends in drug use. Chapter 6 presents young adults' attitudes and beliefs about drugs, while Chapter 7 discusses the social milieu. Chapters 8 and 9 look at the prevalence and trends in drug use among college students. (Contains 30 tables and 55 references.) (GCP)

Reproductions supplied by EDRS are the best that can be made
from the original document.

ED 469 202

National Institute on Drug Abuse

Monitoring the Future

National Survey Results on Drug Use, 1975-2001

Volume II:

College Students & Adults Ages 19-40

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☐ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

2001

CG031966

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY
J. BACHMAN
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
1

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

BEST COPY AVAILABLE

MONITORING THE FUTURE

NATIONAL SURVEY RESULTS ON DRUG USE, 1975-2001

Volume II

College Students and Adults Ages 19-40

by

Lloyd D. Johnston, Ph.D.
Patrick M. O'Malley, Ph.D.
Jerald G. Bachman, Ph.D.

The University of Michigan
Institute for Social Research

National Institute on Drug Abuse
6001 Executive Boulevard
Bethesda, Maryland 20892

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

This publication was written by the principal investigators and staff of The Monitoring the Future project, at the Institute for Social Research, the University of Michigan, under Research Grant No. 3 R01 DA 01411 from the National Institute on Drug Abuse.

Public Domain Notice

All material appearing in this volume is in the public domain and may be reproduced or copied without permission from the Institute or the authors. Citation of the source is appreciated.

Recommended Citation

Johnston, L.D., O'Malley, P.M., & Bachman, J.G. (2002). *Monitoring the Future national survey results on drug use, 1975-2001. Volume II: College students and adults ages 19-40* (NIH Publication No. 02-5107). Bethesda, MD: National Institute on Drug Abuse.

National Institute on Drug Abuse
NIH Publication No. 02-5107
Printed August 2002

ABBREVIATED TABLE OF CONTENTS

Detailed Table of Contents v

List of Tables ix

List of Figures xi

Chapter 1 **Introduction** 1

Chapter 2 **Key Findings: An Overview and Integration Across Five Populations** .. 5

Chapter 3 **Study Design and Procedures** 47

Chapter 4 **Prevalence of Drug Use in Early and Middle Adulthood** 61

Chapter 5 **Trends in Drug Use in Early to Middle Adulthood** 103

Chapter 6 **Attitudes and Beliefs about Drugs Among Young Adults** 157

Chapter 7 **The Social Milieu for Young Adults** 173

Chapter 8 **Prevalence of Drug Use Among College Students** 199

Chapter 9 **Trends in Drug Use Among College Students** 209

DETAILED TABLE OF CONTENTS

Page

Chapter 1 **Introduction** 1

Surveys of College Students 1
Surveys of Young Adults and Those Aged 35 and 40......2
General Purposes of the Research......2

Chapter 2 **Key Findings: An Overview and Integration Across Five Populations** 5

Trends in Illicit Drug Use 6
  College-Noncollege Differences in Illicit Drug Use 19
  Male-Female Differences in Illicit Drug Use 20
Trends in Alcohol Use 20
  Male-Female Differences in Alcohol Use 21
  College-Noncollege Differences in Alcohol Use 21
Trends in Cigarette Smoking 22
  Age and Cohort-Related Differences in Cigarette Smoking......24
  College-Noncollege Differences in Cigarette Smoking 25
  Male-Female Differences in Cigarette Smoking 25
Racial/Ethnic Comparisons......26
Drug Use in Eighth Grade......27
Drug Use by Age 40 28
Summary and Conclusions 30

Chapter 3 **Study Design and Procedures** 47

Research Design and Procedures for the Surveys of Seniors 47
  The Population Under Study......47
  The Omission of Dropouts......48
  Sampling Procedures 48
  Questionnaire Administration......48
  Questionnaire Format......49
Research Design and Procedures for the Surveys of Lower Grades 49
Research Design and Procedures for the Follow-Up Surveys of Seniors......51
  Follow-Up Procedures 52
  Panel Retention Rates 52
  Corrections for Panel Attrition......52
  Follow-Up Questionnaire Format 53
Representativeness and Sample Accuracy......53
  School Participation 53
  Student Participation......55
  Sampling Accuracy of the Estimates 55
Validity of the Measures of Self-Reported Drug Use......56
Consistency and the Measurement of Trends 57

DETAILED TABLE OF CONTENTS (continued)

EARLY AND MIDDLE ADULTHOOD

Page

Chapter 4 **Prevalence of Drug Use in Early and Middle Adulthood** 61

A Note on Adjusted Lifetime Prevalence Estimates 62
Prevalence of Drug Use as a Function of Age 63
Prevalence Comparisons for Subgroups of Young Adults 68
  Gender Differences 68
  Regional Differences 69
  Population Density Differences 70

Chapter 5 **Trends in Drug Use in Early to Middle Adulthood** 103

Trends in Prevalence: Early and Middle Adulthood 104
Trends for Important Subgroups of Young Adults 112
  Gender Differences in Trends 112
  Regional Differences in Trends 116
  Population Density Differences in Trends 119

Chapter 6 **Attitudes and Beliefs about Drugs Among Young Adults** 157

Perceived Harmfulness of Drugs 157
Personal Disapproval of Drug Use 161
A Further Commentary: Cohort Differences and Their Implications for Prevention and Theory 164

Chapter 7 **The Social Milieu for Young Adults** 173

Peer Norms as Perceived by Young Adults 173
  Current Perceptions of Friends' Attitudes 174
  Trends in Peer Norms 174
Exposure to Drug Use by Friends and Others 176
  Exposure to Drug Use Among Young Adults 176
  Trends in Exposure to Drug Use by Young Adults 178
Perceived Availability of Drugs by Young Adults 180
  Perceived Availability 180
  Trends in Perceived Availability 181

DETAILED TABLE OF CONTENTS (continued)

COLLEGE STUDENTS

Page

Chapter 8 **Prevalence of Drug Use Among College Students** ... 199

Prevalence of Drug Use: College Students Versus Those Not in College ... 200
Gender Differences in Prevalence of Use Among College Students ... 201

Chapter 9 **Trends in Drug Use Among College Students** ... 209

Trends in Prevalence 1980-2001: College Students Versus Those Not in College ... 210
Gender Differences in Trends Among College Students ... 215

LIST OF TABLES

Page

Table 2-1. Trends in Lifetime Prevalence of Use of Various Drugs for Eighth, Tenth, and Twelfth Graders, College Students, and Young Adults (Ages 19-28) 34

Table 2-2. Trends in Annual and 30-Day Prevalence of Use of Various Drugs for Eighth, Tenth, and Twelfth Graders, College Students, and Young Adults (Ages 19-28) 40

Table 2-3. Trends in 30-Day Prevalence of Daily Use of Various Drugs for Eighth, Tenth, and Twelfth Graders, College Students, and Young Adults (Ages 19-28) 45

Table 3-1. Sample Sizes and Response Rates 58

Table 4-1. Prevalence of Use of Various Types of Drugs by Gender, 2001, Among Respondents of Modal Age 19-32 72

Table 4-2. Lifetime Prevalence of Use of Various Types of Drugs by Subgroups, 2001, Among Respondents of Modal Age 19-32 74

Table 4-3. Annual Prevalence of Use of Various Types of Drugs by Subgroups, 2001, Among Respondents of Modal Age 19-32 76

Table 4-4. 30-Day Prevalence of Use of Various Types of Drugs by Subgroups, 2001, Among Respondents of Modal Age 19-32 78

Table 4-5. 30-Day Prevalence of Daily Use of Various Types of Drugs by Subgroups, 2001, Among Respondents of Modal Age 19-32 80

Table 5-1. Trends in Lifetime Prevalence of Various Types of Drugs Among Respondents of Modal Age 19-28 124

Table 5-2. Trends in Annual Prevalence of Various Types of Drugs Among Respondents of Modal Age 19-28 126

Table 5-3. Trends in 30-Day Prevalence of Various Types of Drugs Among Respondents of Modal Age 19-28 127

Table 5-4. Trends in 30-Day Prevalence of Daily Use of Various Types of Drugs Among Respondents of Modal Age 19-28 128

Table 5-5. Trends in Annual and 30-Day Prevalence of an Illicit Drug Use Index Among Respondents of Modal Age 19-28 129

Table 6-1. Trends in Perceived Harmfulness of Drugs: High School Seniors (Age 18) and Young Adults in Modal Age Groups of 19-22, 23-26, and 27-30 166

LIST OF TABLES (continued)

Page

Table 6-2. Trends in Proportions Disapproving of Drug Use: High School Seniors (Age 18) and Young Adults in Modal Age Groups of 19-22, 23-26, and 27-30 170

Table 7-1. Trends in Proportion of Friends Who Disapprove of Drug Use: High School Seniors (Age 18) and Young Adults in Modal Age Groups of 19-22, 23-26, and 27-30 184

Table 7-2. Trends in Proportion of Friends Using Drugs: High School Seniors (Age 18) and Young Adults in Modal Age Groups of 19-22, 23-26, and 27-30 186

Table 7-3. Trends in Exposure to Drug Use: High School Seniors (Age 18) and Young Adults in Modal Age Groups of 19-22, 23-26, and 27-30 192

Table 7-4. Trends in Reported Availability of Drugs: High School Seniors (Age 18) and Young Adults in Modal Age Groups of 19-22, 23-26, and 27-30 196

Table 8-1. Lifetime Prevalence of Use for Various Types of Drugs, 2001: Full-Time College Students vs. Others Among Respondents 1-4 Years Beyond High School 203

Table 8-2. Annual Prevalence of Use for Various Types of Drugs, 2001: Full-Time College Students vs. Others Among Respondents 1-4 Years Beyond High School 204

Table 8-3. 30-Day Prevalence of Use for Various Types of Drugs, 2001: Full-Time College Students vs. Others Among Respondents 1-4 Years Beyond High School 205

Table 8-4. 30-Day Prevalence of Daily Use for Various Types of Drugs, 2001: Full-Time College Students vs. Others Among Respondents 1-4 Years Beyond High School 206

Table 8-5. Lifetime, Annual, and 30-Day Prevalence of an Illicit Drug Use Index, 2001: Full-Time College Students vs. Others Among Respondents 1-4 Years Beyond High School 207

Table 9-1. Trends in Lifetime Prevalence of Various Types of Drugs Among College Students 1-4 Years Beyond High School 217

Table 9-2. Trends in Annual Prevalence of Various Types of Drugs Among College Students 1-4 Years Beyond High School 218

Table 9-3. Trends in 30-Day Prevalence of Various Types of Drugs Among College Students 1-4 Years Beyond High School 219

Table 9-4. Trends in 30-Day Prevalence of Daily Use of Various Types of Drugs Among College Students 1-4 Years Beyond High School 220

Table 9-5. Trends in Lifetime, Annual, and 30-Day Prevalence of an Illicit Drug Use Index Among College Students 1-4 Years Beyond High School, by Gender 221

LIST OF FIGURES

Page

Figure 3-1. Schools Included in One Year's Data Collection, Eighth, Tenth and Twelfth Grades 59

Figure 3-2. School Response Rates 60

Figure 4-1 - 4-18. Lifetime, Annual, and 30-Day Prevalence Among High School Seniors and Adults Through Age 40, 2001, by Age Group

4-1. Any Illicit Drug 81
4-2. Any Illicit Drug Other than Marijuana 82
4-3. Marijuana 83
4-4. Amphetamines 84
4-5. Cocaine 85
4-6. Crack Cocaine 86
4-7. Other Cocaine 87
4-8. Hallucinogens 88
4-9. LSD 89
4-10. Hallucinogens Other than LSD 90
4-11. Inhalants 91
4-12. Barbiturates 92
4-13. Narcotics Other than Heroin 93
4-14. Tranquilizers 94
4-15. MDMA 95
4-16. Crystal Methamphetamine ("Ice") 96
4-17. Steroids 97
4-18. Heroin 98

Figure 4-19a. Alcohol: Lifetime, Annual, and 30-Day Prevalence Among High School Seniors and Adults Through Age 40, 2001, by Age Group 99

Figure 4-19b. Alcohol: Two-Week Prevalence of Five or More Drinks in a Row and 30-Day Prevalence of Daily Use Among High School Seniors and Adults Through Age 40, 2001, by Age Group 100

Figure 4-20. Cigarettes: Annual, 30-Day, Daily, and Half-Pack-a-Day Prevalence Among High School Seniors and Adults Through Age 40, 2001, by Age Group 101

Figure 5-1. Any Illicit Drug: Trends in Annual Prevalence Among High School Seniors and Adults Through Age 40, by Age Group 130

LIST OF FIGURES (continued)

Page

Figure 5-2. Any Illicit Drug Other than Marijuana: Trends in Annual Prevalence Among High School Seniors and Adults Through Age 40, by Age Group.. 131

Figure 5-3a. Marijuana: Trends in Annual Prevalence Among High School Seniors and Adults Through Age 40, by Age Group 132

Figure 5-3b. Marijuana: Trends in 30-Day Prevalence Among High School Seniors and Adults Through Age 40, by Age Group 133

Figure 5-3c. Marijuana: Trends in 30-Day Prevalence of Daily Use Among High School Seniors and Adults Through Age 40, by Age Group 134

Figure 5-4. Inhalants: Trends in Annual Prevalence Among High School Seniors and Adults Through Age 40, by Age Group 135

Figure 5-5. Hallucinogens: Trends in Annual Prevalence Among High School Seniors and Adults Through Age 40, by Age Group 136

Figure 5-6. LSD: Trends in Annual Prevalence Among High School Seniors and Adults Through Age 40, by Age Group 137

Figure 5-7. Hallucinogens Other than LSD: Trends in Annual Prevalence Among High School Seniors and Adults Through Age 40, by Age Group 138

Figure 5-8. MDMA: Trends in Annual Prevalence Among High School Seniors and Adults Through Age 40, by Age Group 139

Figure 5-9. Cocaine: Trends in Annual Prevalence Among High School Seniors and Adults Through Age 40, by Age Group 140

Figure 5-10. Crack Cocaine: Trends in Annual Prevalence Among High School Seniors and Adults Through Age 40, by Age Group 141

Figure 5-11. Heroin: Trends in Annual Prevalence Among High School Seniors and Adults Through Age 40, by Age Group 142

Figure 5-12. Narcotics Other than Heroin: Trends in Annual Prevalence Among High School Seniors and Adults Through Age 40, by Age Group 143

Figure 5-13. Amphetamines: Trends in Annual Prevalence Among High School Seniors and Adults Through Age 40, by Age Group 144

LIST OF FIGURES (continued)

Page

Figure 5-14. Ice: Trends in Annual Prevalence Among High School Seniors and Adults Through Age 40, by Age Group 145

Figure 5-15. Barbiturates: Trends in Annual Prevalence Among High School Seniors and Adults Through Age 40, by Age Group 146

Figure 5-16. Tranquilizers: Trends in Annual Prevalence Among High School Seniors and Adults Through Age 40, by Age Group 147

Figure 5-17. Steroids: Trends in Annual Prevalence Among High School Seniors and Adults Through Age 40, by Age Group 148

Figure 5-18a. Alcohol: Trends in Annual Prevalence Among High School Seniors and Adults Through Age 40, by Age Group 149

Figure 5-18b. Alcohol: Trends in 30-Day Prevalence Among High School Seniors and Adults Through Age 40, by Age Group 150

Figure 5-18c. Alcohol: Trends in 30-Day Prevalence of Daily Use Among High School Seniors and Adults Through Age 40, by Age Group 151

Figure 5-18d. Alcohol: Trends in Two-Week Prevalence of Having Five or More Drinks in a Row at Least Once Among High School Seniors and Adults Through Age 40, by Age Group 152

Figure 5-19a. Cigarettes: Trends in 30-Day Prevalence Among High School Seniors and Adults Through Age 40, by Age Group 153

Figure 5-19b. Cigarettes: Trends in 30-Day Prevalence of Daily Use Among High School Seniors and Adults Through Age 40, by Age Group 154

Figure 5-19c. Cigarettes: Trends in 30-Day Prevalence of Smoking a Half-Pack or More Daily Among High School Seniors and Adults Through Age 40, by Age Group 155

Figure 9-1. Any Illicit Drug: Trends in Annual Prevalence Among College Students vs. Others and Male vs. Female College Students 222

Figure 9-2. Any Illicit Drug Other than Marijuana: Trends in Annual Prevalence Among College Students vs. Others and Male vs. Female College Students 223

LIST OF FIGURES (continued)

Page

Figure 9-3. Marijuana: Trends in Prevalence Among College Students vs. Others and Male vs. Female College Students

a. Annual Prevalence 224
b. 30-Day Prevalence of Daily Use 225

Figure 9-4. - 9-13. Trends in Annual Prevalence Among College Students vs. Others and Male vs. Female College Students

9-4. Inhalants 226
9-5. Hallucinogens 227
9-6. LSD 228
9-7. Hallucinogens Other than LSD 229
9-8. MDMA (Ecstasy) 230
9-9. Cocaine 231
9-10. Narcotics Other than Heroin 232
9-11. Amphetamines 233
9-12. Barbiturates 234
9-13. Tranquilizers 235

Figure 9-14. Alcohol: Trends in Prevalence Among College Students vs. Others and Male vs. Female College Students

a. Annual Prevalence 236
b. 30-Day Prevalence 237
c. 30-Day Prevalence of Daily Use 238
d. Two-Week Prevalence of Five or More Drinks in a Row 239

Figure 9-15. Cigarettes: Trends in Prevalence Among College Students vs. Others and Male vs. Female College Students

a. 30-Day Prevalence 240
b. 30-Day Prevalence of Daily Use 241
c. 30-Day Prevalence of Use of Half-Pack or More per Day 242

14

Chapter 1

INTRODUCTION

This is the second volume in a two-volume set. The set reports the results through 2001 of all surveys conducted as part of the Monitoring the Future study of American secondary school students, college students, and young adults. Adults through age 40 also are part of the age spectrum covered in this study.

Monitoring the Future is a long-term research program conducted at the University of Michigan's Institute for Social Research under a series of investigator-initiated research grants from the National Institute on Drug Abuse. It is composed, in part, of ongoing series of annual national surveys of (a) high school seniors begun in 1975, and (b) eighth- and tenth-grade students begun in 1991. Results from these surveys are reported in Volume I.

In addition, annual *follow-up surveys* have been conducted of representative samples of the previous participants from each high school senior class, beginning with the class of 1976. This second volume presents the results of the 1977 through 2001 follow-up surveys of the graduating high school classes of 1976 through 2000 as these respondents have progressed into adulthood, through age 40 for the oldest respondents.

In order for this volume to stand alone, some material from Volume I is repeated here. Specifically, Chapter 2 in this volume is the same as Chapter 2 in Volume I; it provides an overview of the key findings presented in both volumes. Chapter 3, Study Design and Procedures, is also the same as Chapter 3, Volume I. Therefore, the reader already familiar with Volume I may wish to skip over these chapters. Otherwise, the content of the two volumes does not overlap.

SURVEYS OF COLLEGE STUDENTS

The follow-up samples in Monitoring the Future provide very good coverage of the national college student population since 1980. College students tend to be a difficult population to study. They generally are not well covered in normal household surveys, which typically exclude dormitories, fraternities, and sororities from the universe covered. Further, the institution-based samples must be quite large in order to attain accurate national representation of college students, because there is great heterogeneity in the types of student populations served in those institutions. There also may be problems getting good samples and high response rates within many institutions. The current study, which in essence draws the college sample in senior year of high school, has considerable advantages for generating a broadly representative sample of the college students to emerge from each graduating cohort, and it does so at very low cost. Further, it has "before" as well as "during" and "after" college measures, which permit the examination of change. For comparison purposes, it also has similar panel data on the high school graduates who are not attending college.

As defined here, the college student population is comprised of all full-time students, one to four years post-high school, enrolled in a two- or four-year college in March during the year of the survey. More will be said about this sample definition in Chapters 3 and 8. Results on the *prevalence* of drug use among college students in 2001 are reported in Chapter 8, and results on the *trends* in substance use among college students over the past 22 national surveys are reported in Chapter 9. Both chapters also report data on the portion of the follow-up samples who are in the same age band as the college students but who are not enrolled in college.

SURVEYS OF YOUNG ADULTS AND THOSE AGED 35 AND 40

The young adult sample, on which we report here, includes the college students and comprises representative samples from each graduating class from 1987 to 2000, all surveyed in 2001. Since 18 is the modal age of high school seniors, the young adults covered here correspond to modal ages 19 through 32. The study design calls for annual follow-up surveys of each class cohort (though not each individual) through age 32, and then surveys at five-year intervals beginning at age 35. Thus, the graduating classes of 1976 through 1986 were not surveyed in 2001, except for the classes of 1979 and 1984, members of which were sent the special "age 40" and "age 35" questionnaires, respectively.

In this volume, we have reweighted the respondents to correct for the effects of panel attrition on measures such as drug use; however, we are less able to adjust for the absence of high school dropouts who were not included in the original high school senior sample. Because nearly all college students have completed high school, the omission of dropouts should have almost no effect on the college student estimates, but this omission does have an effect on the estimates for entire age groups. Therefore, the reader is cautioned that the omission of the 15% to 20% of each cohort who drop out of high school will make the drug use estimates given here for the various young adult age bands somewhat low for the age group as a whole. The proportional effect may be greatest for some of the most dangerous drugs such as heroin and crack, and also for cigarettes—the use of which is highly correlated with educational aspirations and attainment.

GENERAL PURPOSES OF THE RESEARCH

The research purposes of the Monitoring the Future study are extensive and can be sketched only briefly here.[1] One major purpose is to serve a social monitoring or social indicator function, intended to characterize accurately the levels and trends in certain behaviors, attitudes, beliefs, and conditions in the population. Social indicators can have important agenda-setting functions for society, and they are useful for gauging progress against national goals. Another purpose of the study is to develop knowledge that increases our understanding of why changes in these behaviors, attitudes, etc., are taking place. (In health-related disciplines, such work is usually labeled *epidemiology*.) These two purposes are addressed in the current series of volumes.

---

[1] For a more complete listing and discussion of the study's many objectives, see Johnston, L. D., O'Malley, P. M., Schulenberg, J., and Bachman, J. G. (2001). *The aims and objectives of the Monitoring the Future study and progress toward fulfilling them as of 2001*. Monitoring the Future Occasional Paper No. 52. Ann Arbor, MI: Institute for Social Research.

There are a number of other purposes for the research, however, which are addressed through other types of publications and professional products. They include helping to determine what types of young people are at greatest risk for developing various patterns of drug abuse; gaining a better understanding of the lifestyles and value orientations associated with various patterns of drug use, and monitoring how those orientations are shifting over time; determining the immediate and more general aspects of the social environment that are associated with drug use and abuse; determining how drug use is affected by major transitions into and out of social environments (such as military service, civilian employment, college, unemployment) or social roles (marriage, pregnancy, parenthood). We also are interested in determining the life course of the various drug-using behaviors during this period of development; distinguishing such "age effects" from cohort and period effects in determining drug use; determining the effects of social legislation on various types of substance use; and determining the changing connotations of drug use and changing patterns of multiple drug use among youth. We believe that the differentiation of period, age, and cohort effects in substance use of various types has been a particularly important contribution of the project; its cohort-sequential research design is especially well suited to allow such differentiation. In fact, a number of important cohort effects that have emerged in the 1990s in terms of both use and attitudes about use will be featured in this volume.

Readers interested in publications dealing with any of these other areas should write the authors at the Institute for Social Research, The University of Michigan, Ann Arbor, Michigan, 48106-1248. Up-to-date information about the study, including copies of the most recent press releases, may be found on the Monitoring the Future Web site at www.monitoringthefuture.org.

Chapter 2

KEY FINDINGS:

AN OVERVIEW AND INTEGRATION ACROSS FIVE POPULATIONS

Monitoring the Future has become one of the nation's most relied-upon sources of information changes in psychoactive drug use among American adolescents and young adults. Over the past quarter century, the study has tracked their use of an ever-growing array of such substances, both illicit and licit, and the list continued to grow this year.

This annual series of monographs, written by the study's investigators and published by its sponsor—the National Institute on Drug Abuse—is one of the major vehicles by which the epidemiological findings from the study are reported. The present two-volume monograph reports findings through 2001. (A companion series of annual reports provides a much briefer, advanced synopsis of the key findings from the latest surveys of secondary school students.[2])

Over its 27-year existence, Monitoring the Future has conducted in-school surveys of nationally representative samples of (a) high school seniors each year since 1975 and (b) eighth- and tenth-grade students each year since 1991. In addition, beginning with the class of 1976, follow-up surveys have been conducted by mail on representative sub-samples of the respondents from each previously participating twelfth-grade class.

A number of important findings have been summarized and integrated in this chapter so that the reader may quickly get an overview of the key results. Because so many populations, drugs, and prevalence intervals are discussed here, a single integrative set of tables (Tables 2-1 through 2-3) showing the 1991-2001 trends for all drugs on all five populations (eighth-grade students, tenth-grade students, twelfth-grade students, full-time college students ages 19-22, and all young adults through age 28 who are high school graduates) is included in this chapter. (Note that the young adult group includes the college student population.)

---

[2] Johnston, L. D., O'Malley P. M., & Bachman, J. G. (2002). *Monitoring the Future national results on adolescent drug use: Overview of key findings, 2001.* (NIH Publication No. 02-5105). Bethesda, MD: National Institute on Drug Abuse. (Also available on the Web at www.monitoringthefuture.org.)

TRENDS IN ILLICIT DRUG USE

Early in the 1990s we noted an increase in the use of a number of illicit drugs among secondary students and some important changes among the students in terms of certain key attitudes and beliefs related to drug use. In the volume reporting 1992 survey results, we noted the beginning of such reversals in both use and attitudes among eighth graders, the youngest respondents surveyed in this study, and also a reversal in attitudes among the twelfth graders. Specifically, the proportions seeing great risk in using drugs began to decline, as did the proportions saying they disapproved of use. As we predicted, those reversals indeed presaged "an end to the improvements in the drug situation that the nation may be taking for granted." The use of illicit drugs rose sharply in all three grade levels after 1992, as negative attitudes and beliefs about drug use continued to erode. This pattern continued for some years.

In 1997, for the first time in six years, illicit drug use finally began to decline among eighth graders. Use of marijuana continued to rise among tenth and twelfth graders, although their use of a number of other drugs leveled off and relevant attitudes and beliefs also began to reverse in many cases. In 1998, illicit drug use continued a gradual decline among eighth graders and started to decline at tenth and twelfth grades. In 1999, 2000, and 2001 the decline continued for eighth graders while use held fairly level among tenth and twelfth graders. The fact that use continues to decline steadily, albeit slowly, among the eighth graders bodes well for an eventual further decline at the upper grades.

- As subsequently illustrated in discussion of specific drugs, the increase in use of many drugs during the 1990s among secondary school students, combined with fairly level rates of use among college students and young adults, resulted in some unusual reversals in the usage rates by age. In the early years of the epidemic, illicit drug use rates clearly were higher in the college-age group (and eventually the young adults) than they were among secondary school students. But by the late 1990s, the highest rates of active use (i.e., annual or 30-day prevalence) tended to be found in the late secondary school years. For example, in 2001, 30-day prevalence of using ***any illicit drug*** is highest in twelfth grade (26%), second highest in tenth grade (23%), third highest among college students (22%), fourth highest among 19- to 28-year-olds (19%), and lowest among eighth graders (12%). When it comes to using ***any illicit drug other than marijuana*** in the past 30 days, the rank order is as follows: twelfth grade (11%), tenth grade (9%), college students (8%), 19- to 28-year-olds (7%), and finally eighth graders (6%). As can be seen, usage rates among tenth and twelfth graders are considerably higher than among young adults and even higher than the college-student segment of the young adult population.

- Until 1997, ***marijuana*** use rose sharply among secondary school students, and their use of a number of ***other illicit drugs*** also rose, though more gradually. An increase in marijuana use also has occurred among American college students, no doubt due largely to "generational replacement," wherein earlier graduating high school class cohorts were replaced in the college population by more recent ones who were more drug experienced before they left high school. A resurgence in illicit drug use spreading *up* the age spectrum is a reversal of the way the epidemic spread several decades earlier. In the 1960s the epidemic began on the nation's college campuses, and then the behavior diffused downward in age to high school students and eventually to junior high school students. This time the increases began in middle schools and radiated up the age spectrum.

The increases in use of ***marijuana*** and of ***other illicit drugs*** taken as a class, were substantially larger, in both proportional and absolute terms, in the three secondary school grades than in either the college or young adult populations. In fact, at present there still is rather little increase in illicit drug use in the young adult population of 19- to 28-year-olds. From 1991 through 1997, their annual prevalence of use of ***any illicit drug*** held remarkably stable at the same time that adolescent use rose appreciably. We believe that, as generational replacement continues to occur, we will likely see some increase in use of illicit drugs by the young adults. In fact, some of that appears to have happened among college students, whose annual prevalence of marijuana use peaked a year later than among twelfth graders and whose 30-day prevalence peaked two years later. Their use of any illicit drug other than marijuana continued to rise through 2001, whereas use by twelfth graders peaked in 1997.

These diverging trends across the different age groups show that changes during the 1990s reflected some cohort effects—lasting differences between class cohorts—rather than broad secular trends, which would appear simultaneously in all of the age groups covered by the study. All during the previous 15 years of the study, the use of most drugs moved in parallel across most age groups, indicating secular change.

- A somewhat parallel finding occurred for ***cigarette*** smoking, in that college students showed a sharp increase in smoking, beginning in 1995, no doubt reflecting a generational replacement effect. (Smoking had been rising among high school seniors since 1992.) This has been a more typical pattern of change for ***cigarettes***, however, since differences in cigarette smoking rates among class cohorts tend to remain through much or all of the life cycle and also tend to account for much of the overall change in use observed at any given age. The increase in current smoking ended among eighth and tenth graders in 1996, among twelfth graders in 1997, but not among college students until 1999. The appreciable decline in the smoking rate that began among the eighth graders appears to be radiating up the age spectrum as they get older. (Their 30-day prevalence rate has fallen from 21% in 1996 to 12% in 2001.) In the early 1990s smoking among eighth and tenth graders had risen by about 50%—a particularly sharp and concerning rise.

- ***Marijuana*** use, which had been rising sharply in all three grades of secondary school during the early to mid-1990s, began to turn downward in 1997 among eighth graders and then did the same in 1998 among tenth and twelfth graders. Only the eighth graders showed a continuation of this decline in 2000, however. In 2001, use remained level in all three grades. In the 1990s, the annual prevalence of marijuana use (i.e., the percent reporting any use during the prior twelve months) tripled among eighth graders (from 6% in 1991 to 18% in 1996), more than doubled among tenth graders (from 15% in 1992 to 35% in 1997), and grew by nearly three-quarters among twelfth graders (from 22% in 1992 to 39% in 1997). Among college students, however, the increase in marijuana use, presumably largely due to a "generational replacement effect," was much more gradual. Annual prevalence rose by about one-third from 27% in 1991 to 36% in 1998, before beginning to level. Among young adults there so far has been even less change, from 24% in 1991 to 29% in 2001, with no decline yet.

  Daily marijuana use rose substantially among secondary school and college students between 1992 and 2000, but somewhat less so among young adults (see Table 2-3). In 2001, the increase in daily use continued for the tenth graders but halted for the eighth and twelfth graders. Nearly 1 in 17 (5.8%) twelfth graders is now a current daily marijuana user. Still, this rate is far below the 10.7% peak figure reached in 1978. Daily use among eighth graders is considerably lower, at 1.3%. In 2001 daily marijuana use among all five populations was at, or very close to, the peak level since the beginning of the 1990s.

  The amount of risk associated with using marijuana fell during the earlier period of increased use and again during the more recent resurgence of use in the 1990s. Indeed, at tenth and twelfth grades, perceived risk began to decline a year *before* use began to rise in the upturn of the 1990s, making perceived risk a leading indicator of change in use. (The same may have happened in eighth grade, as well, but we do not have data starting early enough to check that possibility.) The decline in perceived risk halted after 1997 in eighth and tenth grade, and use began to decline a year or two later. Again, perceived risk was a leading indicator of change in use.

  Personal disapproval of marijuana use slipped considerably among eighth graders between 1991 and 1996 and among tenth and twelfth graders between 1992 and 1997. For example, the proportions of eighth, tenth, and twelfth graders who said they disapproved of trying marijuana once or twice fell by 17, 21, and 19 percentage points, respectively, over those intervals of decline. There has since been a little increase in disapproval among eighth and tenth graders, but among twelfth graders there was some decline in disapproval in 2001.

- Among seniors, the proportions using ***any illicit drug other than marijuana*** in the past year rose from a low of 15% in 1992 to 21% in 1997. (This recent peak in 1997 was substantially below the 34% peak rate in 1981.) In fact, all of the younger groups showed significant increases (though not as large in proportional terms as for marijuana). Use of any illicit drug other than marijuana began to increase in 1992 among eighth graders, in 1993 among tenth and twelfth graders, and in 1995 among college students—again reflecting evidence of a cohort effect. Use peaked in 1996 among eighth and tenth graders and by 1997 among twelfth graders, but it has yet to peak among the college students and young adults. The eighth graders have shown some gradual decline in their use of the other illicit drugs, taken as a class, since 1996; but the brief period of decline among tenth graders ended after 1998.

- Between 1989 and 1992 we noted an increase among high school seniors, college students, and young adults in their use of ***LSD***, a drug most popular in the late 1960s and early 1970s. By 1992, the newly added populations (eighth and tenth graders) were also showing an increase in LSD use; and for several more years, modest increases persisted in all five populations. Use of LSD among college students and young adults was the first to peak, in 1995. Use in all three grades of secondary school peaked a year later. Since those peak years in the mid-1990s, there has been some decline in the relatively low rates of LSD use across the board.

  Prior to the significant increase in LSD use among seniors in 1993, there was a significant 4.3 percentage point decline between 1991 and 1992 in the proportion seeing great risk associated with trying LSD. (Once again this belief proved a leading indicator of change in use.) The decline in perceived risk continued through 1997 and halted in 1998. The proportion of seniors disapproving of LSD use also began to decline in 1992 and continued through 1996.

  Because LSD was one of the earliest drugs to be popularly used in the overall American drug epidemic, there is a distinct possibility that young people—particularly the youngest cohorts, like the eighth graders—are not as concerned about the risks of use. They have had less opportunity to learn vicariously about the consequences of use by observing others around them or to learn from intense media coverage of the issue, which occurred some years earlier. We were concerned that this type of "generational forgetting" of the dangers of a drug, which occurs as a result of generational replacement, could set the stage for a whole new epidemic of use. In fact, perceived harmfulness of LSD began to decline after 1991 among seniors. These measures for risk and disapproval were first introduced for eighth and tenth graders in 1993 and both measures dropped until 1997 or 1998, after which perceived risk and disapproval leveled (or declined some). Because the decline in use in the last few years has *not* been accompanied by expected changes in these attitudes and beliefs, we are inclined to think that there may be some displacement by another drug taking place. The most logical candidate is ***ecstasy***, which is also used for its hallucinogenic effects and which has been very much on the rise recently.

- Questions about the use of ***ecstasy*** (***MDMA***) have been included in the follow-up surveys of college students and young adults since 1989; however, because of our concern about stimulating interest in an attractive-sounding and little-known drug, these questions were not added to the secondary school surveys until 1996. From 1989 to 1994, the annual prevalence rates tended to be quite low in the older age groups for whom we had data, but in 1995 there was a substantial increase (from 0.5% to 2.4% among college students, and from 0.7% to 1.6% among young adults generally).

  When data were first gathered on secondary school students in 1996, the tenth and twelfth graders showed higher rates of annual use (both 4.6%) than the college students (2.8%). Ecstasy use then fell steadily at all three grades between 1996 and 1998, though it did not fall in the older age groups. Since 1998 its use has risen sharply in all five populations. In fact, annual prevalence has more than doubled in that three-year period among twelfth graders, college students, and young adults and nearly doubled in the lower grades. In 2000 even the eighth graders showed a significant increase in use. Among the young adults, the increase in use has occurred primarily among those under age 29. The rates of annual prevalence in 2001 were: 4%, 6%, and 9% among eighth, tenth, and twelfth graders, respectively, 9% among college students, and 8% among all young adults.

  There has been quite a dramatic increase in the reported availability of this drug in recent years, which seems to be substantiated by seizure data. As of 2000 there had been little increase in the perceived degree of risk associated with ecstasy. The mounting media attention to the drug and its consequences may be behind the dramatic increase in perceived risk of ecstasy use among the twelfth graders in 2001, as we predicted might occur. Disapproval, however, continued the gradual decline started in 1999. (Trend data is not available for eighth and tenth graders.)

- Between 1982 and 1992, annual prevalence rates for the use of ***amphetamines*** among seniors fell by nearly two-thirds, from 20% to 7%. Rates among college students fell even more over the same interval, from 21% to 4%. Annual use increased by about half among eighth and tenth graders between 1991 and 1996, and there were increases among twelfth graders and college students between 1992 and 1996. In 1997, use declined significantly among eighth graders and leveled among tenth graders, but use continued to increase among twelfth graders. After 1997, use continued to decline in eighth and tenth grade, before leveling in 2000, and remained fairly level at twelfth grade. Use continues to increase among college students and young adults, however, perhaps reflecting the effects of generational replacement.

The increase in use of illicit amphetamines (and a decrease in disapproval) that began among seniors in 1993 followed a sharp drop in perceived risk a year earlier (which, as we have said, often serves as a leading indicator). Following a period of decline, disapproval and perceived risk associated with amphetamine use stabilized in 1997 among seniors, while use showed a leveling. In 1998, there was a bump up in perceived risk, but some correction back the next year. This general pattern of change is consistent with our theoretical position that perceived risk can drive both disapproval and use.

College students showed a modest increase in amphetamine use during the 1990s, but the absolute prevalence rates are only about half those for tenth and twelfth graders; and use among young adults generally is lower still and has changed rather little.

- ***Ritalin*** has been among the most widely reported specific amphetamines in recent years; its use increased among high school seniors from an annual prevalence of 0.1% in 1992 to 2.8% in 1997, before leveling. (See Appendix E, Table E-2.)[3] Use of ***ice*** (***crystal methamphetamine***) increased in the late 1990s but has declined some since 1998. ***Methamphetamine*** questions were introduced in 1999, and a modest decline was observed in its use among all five populations in 2000. However, by 2001 usage rates in all five populations have changed rather little since the first measurement point in 1999. The annual prevalence rates observed in 2001 for methamphetamine are 3%, 4%, 4%, 2%, and 3% among eighth graders, tenth grade, twelfth graders, college students, and all young adults, respectively.

- ***Inhalants*** constitute another class of abusable substances in which a troublesome increase (this time a longer-term one) was followed by a reversal among secondary school students. The reversal came after 1995 in this instance. Inhalants are defined as fumes or gases that are inhaled to get high, and they include common household substances such as glues, aerosols, butane, and solvents. One class of inhalants, ***amyl and butyl nitrites***, became somewhat popular in the late 1970s, but their use has been almost eliminated. For example, their annual prevalence rate among twelfth-grade students was 6.5% in 1979 but only 0.6% in 2001.

  When the nitrites are removed from consideration, it appears that all other inhalants, taken together, showed an upward trend in annual use until 1995.

---

[3] As is discussed in Appendix E, the absolute prevalence for ritalin is probably higher than these statistics indicate, but the trend story likely is quite accurate.

Largely prompted by reports of Monitoring the Future survey findings regarding the rise in inhalant use, the Partnership for a Drug-Free America launched an anti-inhalant ad campaign in mid-April of 1995. By the 1996 spring survey of eighth and tenth graders (twelfth graders are not asked about the dangers of inhalants), there was a sharp increase (of three to six percentage points, depending on the measure) in the percent who said that using inhalants carries great risk to the user. Inhalant use in all grades began to decline in 1996 and continued declining through 1999 in all grades, after a long and steady increase in the preceding years. This is all the more noteworthy because illicit drug use generally was still increasing in 1996 and (for the upper two grades) in 1997 as well. The gradual decline in inhalant use continued into 2001 in all five populations.

Some 9% of the 2001 eighth graders and 7% of the tenth graders indicated inhalant use in the prior 12 months, making inhalants the second most widely used class of illicitly used drugs for eighth graders (after marijuana) and the third most widely used (after marijuana and amphetamines) for tenth graders. Inhalants can and do cause death, which tragically, often occurs among those in their early teens. Because the use of inhalants decreases with age, this class of drugs shows an unusual pattern, with active use being highest among the eighth graders (9% annual prevalence in 2001) and lowest among the young adult population (annual prevalence of only 2% in 2001).

- ***Crack cocaine*** use spread rapidly from the early to the mid-1980s. Still, among high school seniors, the overall prevalence of crack leveled in 1987 at a relatively low prevalence rate (3.9% annual prevalence), even though crack use had continued to spread to new communities. Clearly it had quickly attained a reputation as a dangerous drug, and by the time of our first measurement of perceived risk in 1987, it was seen as the most dangerous of all of the drugs. Annual prevalence dropped sharply in the next few years, reaching 1.5% by 1991, where it remained through 1993. Perceived risk began what turned out to be a long and substantial decline after 1990. Use began to rise gradually after 1993, when it was 1.5%, to 2.7% by 1999, before finally declining in 2000.

Among eighth and tenth graders, crack use had risen gradually in the 1990s: from 0.7% in 1991 to 2.1% by 1998 among eighth graders, and from 0.9% in 1992 to 2.5% in 1998 among tenth graders. In 1999 there was a significant decrease in use among eighth graders while use among tenth graders leveled. In contrast, among young adults 1 to 10 years past high school, annual prevalence was only 1.3% in 2001, virtually unchanged since 1992. Nor was there much change in the low rates of crack use among college students during the 1990s. Except for the recent modest decline among eighth and tenth graders, there does not yet seem to be a turnaround (as we have seen for most other drugs) in the crack situation, and perceived risk continued to decline in 1999 at all grade levels. This pattern of an increase among younger age levels, but none among older ones, would be consistent with the notion that perceived risk eroded as generational replacement has taken place. Because the crack epidemic of the mid-1980s is not that far back, the older age groups may still remember the lessons learned during that historical period.

Among seniors in high school, annual crack prevalence among the college-bound is considerably lower than among those not bound for college (1.5% for college-bound versus 4.4% for noncollege-bound, in 2001).

We believe that the particularly intense and early media coverage of the hazards of crack cocaine likely had the effect of "capping" an epidemic early, by deterring many would-be users and by motivating many experimenters to desist use. As has been mentioned, when we first measured crack use in 1987, it had the highest level of perceived risk of any of the illicit drugs. Also, it did not turn out to be "instantly addicting" upon first-time use, as had been reported widely. While 3.7% of seniors in 2001 reported ever having tried crack, only 1.1% reported use in the past month, indicating that 70% of those who tried crack did not establish a pattern of continued use.

In 1993, the levels of perceived risk and disapproval associated with crack dropped in all three grade levels, foretelling the rise in use that occurred in all three grades between 1994 and 1998. Because more than a decade has now passed since the media frenzy about crack use peaked in 1986, it is quite possible that "generational forgetting" of the risks of that drug has been occurring. Indeed, perceived risk of crack use had been eroding steadily at all grade levels since 1991 (or 1992 in the case of the twelfth graders) through 2000; however, in 2001 the decline halted in all three grades.

- ***Cocaine***[4] in general began to decline a year earlier than crack, probably because crack was still in the process of diffusing to new parts of the country since it was still quite new. Between 1986 and 1987 the annual prevalence rate for cocaine dropped dramatically, by roughly one-fifth in all three populations then being studied—seniors, college students, and young adults. The decline occurred when young people began to view experimental and occasional use—the type of use in which they are most likely to engage—as more dangerous. This change first began to occur in 1987, probably partly because the hazards of cocaine use received extensive media coverage during the preceding year, but almost surely in part because of the highly publicized cocaine-related deaths in 1986 of sports stars Len Bias and Don Rogers. By 1992, the annual prevalence of cocaine use had fallen by about two-thirds among the three populations for which long-term data are available (twelfth graders, college students, and young adults).

---

[4] Unless otherwise specified, all references to "cocaine" refer to the use of cocaine in any form, including crack.

During the 1990s, however, cocaine use in all five populations increased some, both beginning and ending in a staggered pattern by age. Use rose among eighth graders from 1991 to 1998, among tenth and twelfth graders from 1992 to 1999, among college students from 1994 to 2000, and among young adults from 1996 through 2001. (Note that a turnaround has yet to occur in the two older groups.)

Again, the story regarding attitudes and beliefs is informative. Having risen substantially after 1986, the perceived risk of using cocaine actually showed some (nonsignificant) decline in 1992 among seniors. In 1993, perceived risk for ***cocaine other than crack*** fell sharply in all grades and disapproval began to decline in all grades, though not as sharply as perceived risk. The decline in perceived risk had virtually ended by 1995 among eighth graders, by 1998 among tenth graders, and by 2000 among twelfth graders. Disapproval declined between 1991 and 1996 among eighth graders, before leveling, and in 1992 through 1998 among tenth and twelfth graders, with the exception of an increase for twelfth graders in 1995. These changes foretold a subsequent leveling of use at each grade level.

Through 1989, there was no decline in perceived availability of cocaine among twelfth graders; in fact, it rose steadily from 1983 to 1989, suggesting that availability played no role in bringing about the substantial downturn in use after 1986. After 1989, however, perceived availability fell some among seniors; the decline may be explained by the greatly reduced proportions of seniors who said they have any friends who use, because friendship circles are an important part of the supply system. From 1992 through 1998 or 1999, there was rather little change in reports of availability of powder cocaine in the three grades, but in the past couple of years there has been some fall-off.

As with all the illicit drugs, lifetime cocaine prevalence climbs with age, reaching 38% by age 40 (among the 2001 survey respondents). Unlike all of the other illicit drugs, active use of cocaine—i.e., annual prevalence or monthly prevalence—holds fairly steady after high school (and until recent years increased in use after high school) rather than declining. (See Figure 4-5 in Volume II.) Nearly all of the other illicit drugs show a decline in active use with age.

- ***PCP*** use fell sharply among high school seniors between 1979 and 1982, from an annual prevalence of 7.0% to 2.2%. It reached a low point of 1.2% in 1988, rose some in the 1990s to 2.6% in 1996, and declined to 1.8% by 2001. For the young adults, the annual prevalence rate rose very slightly from 0.2% in 1996 to 0.6% in 2001.

- Looking at the long-term trends, we see that the annual prevalence of ***heroin*** use among twelfth graders fell by half between 1975 (1.0%) and 1979 (0.5%). It then stabilized for 15 years, through 1994. Heroin use was also stable in the early 1990s among the other four populations covered here. Then, in 1994 in the case of the eighth graders, and in 1995 in the case of all other groups, there was a sudden uptick in use, with rates jumping in one or two years to two or three times what they had been. The new higher levels of heroin use remained among all five populations for the rest of the decade. In 2000, however, there was a significant decrease in use among eighth graders (from 1.4% in 1999 to 1.1% in 2000) and a significant increase in use among seniors (from 1.1% in 1999 to 1.5% in 2000). The increase among seniors was due entirely to an increase in non-injection use. Use of heroin declined significantly among tenth and twelfth graders in 2001, as did their use of heroin without a needle.

Two factors very likely contributed to the upturn in heroin use in the 1990s. One is a long-term decline in the perceived risk of harm, probably due to "generational forgetting," because it had been a long time since the country had experienced a heroin epidemic. The second factor, not unrelated to the first, is that in recent years the increased purity of heroin has allowed it to be used by means other than injection. This may have lowered an important psychological barrier for some potential users by making heroin use less aversive, and by making it seem less addictive as well as safer, because non-injection reduces the likelihood of transmission of HIV, hepatitis, or other serious diseases. Using some new questions on heroin use introduced in 1995, we were able to show that significant proportions of past-year users in all five populations were indeed taking heroin by means other than injection. (See Table 2-2 and Chapter 4 of Volume I for details.)

The risk perceived to be associated with heroin fell for more than a decade after the study began, with 60% of the 1975 seniors seeing a great risk of trying heroin once or twice and only 46% of the 1986 seniors saying the same. (The decline may be an example of generational forgetting, as the heroin epidemic of the early 1970s faded into the distant past.) Between 1986 and 1991 perceived risk rose some, from 46% to 55%, undoubtedly reflecting the newly recognized threat of HIV infection associated with heroin injection. After 1991, however, perceived risk fell again (to 51% by 1995), this time perhaps reflecting the fact that the newer heroin available on the street could be administered by methods other than injection because it was so much purer. In 1996, perceived risk among seniors began to rise once again, and then rose sharply by 1997 and continued to rise in 1998—perhaps as the result of an anti-heroin campaign launched by the Partnership for a Drug-Free America in June 1996, as well as the visibility of heroin-related deaths of some celebrities in the entertainment and fashion design worlds. The perceived risk of trying heroin began to decrease among seniors in 1999, however, foretelling a significant increase in their use of the drug in 2000. In 2001, as the perceived risk of trying heroin increased slightly, their use finally declined significantly.

Questions about the degree of risk perceived to be associated with heroin use were first introduced into the questionnaires for eighth and tenth graders in 1995. The questions asked specifically and only about use "without using a needle," because we thought this was the form of heroin use of greatest concern at that point. (Similar questions were asked of twelfth graders, as well, in one of the six questionnaire forms.) In general, perceived risk in all three grades rose in 1996 and 1997, before leveling.

- The use of ***narcotics other than heroin*** is reported only for the oldest three populations, because we believe younger students are not accurately discriminating among the drugs that should be included or excluded from this general class. Use had been declining gradually over most of the life of the study in the age groups under study. Seniors had an annual prevalence rate of 6.4% in 1977, which fell to 3.3% by 1992. From about 1992 through 2001, all of the older age groups showed a continuing increase, reaching peak levels of use in 2001, with young adults showing a significant one-year increase this year. (A closer look at the age breakdowns suggests that most of this increase among young adults is concentrated among 19- to 24- year-olds.) The specific drugs in this class are listed in Table E-4 in Appendix E of Volume I, which shows that codeine and opium are among the ones most commonly mentioned by high school seniors in recent years. They also account for much of the increase in the general class, though there have also been increases in the reported use of morphine and Demerol™."

- A long, substantial decline, which began in 1977, occurred for ***tranquilizer*** use among high school seniors. By 1992, annual prevalence reached 2.8%, down from 11% in 1977. Since 1992, use increased significantly (as has been true with most of the drugs), reaching 5.8% in 1999, where it remained in 2000. Reported tranquilizer use also exhibited some modest increase among eighth graders, from 1.8% in 1991 to 3.3% in 1996, before declining a bit to 2.6% in 1998. (Use stood at 3.0% in 2001.) Among tenth graders, annual prevalence remained stable between 1991 and 1994, at around 3.3%, increased significantly to 4.6% by 1996, and to 5.9% by 2001. After a period of stability, college students also showed some increase between 1994 and 2001. For the young adult sample, after a long period of decline, annual prevalence increased significantly in 1998, 2000, and 2001. Most of the reported tranquilizer use in recent years has involved taking Valium™ and Xanax™. (See Table E-3 in Appendix E of Volume I.)

- The long-term gradual decline in ***barbiturate*** use, which began at least as early as 1975, when the study began, halted in 1992. Use among twelfth graders then rose steadily to 6.2% in 2000—only a little more than half of the rate in the peak year of 1975. The 2001 annual prevalence of this class of sedative drugs is lower among young adults (3.7%) and college students (3.8%) than among seniors (5.7%). Use among college students began to rise a couple of years later than it did among twelfth graders, no doubt reflecting the impact of generational replacement. (Data are not included here for eighth and tenth grades, again because we believe the younger students have more problems with the proper classification of the relevant drugs.)

- ***Methaqualone***, another sedative drug, has shown quite a different trend pattern than barbiturates. Its use rose among seniors from 1975 to 1981, when annual prevalence reached 8%. Its use then fell very sharply, declining to 0.2% by 1993, before rising significantly during the general drug resurgence in the 1990s, to 1.1% by 1996, where it leveled until use decreased significantly to 0.3% in 2000; it then leveled in 2001. Use also fell among all young adults and among college students, who had annual prevalence rates of only 0.3% and 0.2%, respectively, by 1989—the last year they were asked about this drug. In the late 1980s, shrinking availability may well have played a role in this drop, as legal manufacture and distribution of the drug ceased. Because of its very low usage rates, only the twelfth-graders are now asked about use of this drug.

- It should be noted that we are seeing in recent years an uninterrupted increase in the use of nearly all of the illicit drugs that are ***central nervous system depressants*** among high school seniors, college students, and young adults generally. These include ***barbiturates***, ***tranquilizers***, and ***narcotics other than heroin***. All of these drugs tended to fall from favor from the mid-1970s through the early 1990s, but many made a comeback in the mid- to late 1990s.

- To summarize, for some years five classes of illicitly used drugs, ***marijuana***, ***amphetamines***, ***cocaine***, ***LSD***, and ***inhalants,*** have had an impact on appreciable proportions of young Americans in their late teens and twenties. In 2001, high school seniors showed annual prevalence rates of 37%, 11%, 5%, 7%, and 5%, respectively. Among college students in 2001, the comparable annual prevalence rates are 36%, 7%, 5%, 4%, and 3%; and for all young adults the rates are 29%, 6%, 6%, 3%, and 2%.

- Joining this set of long-established drugs as among the more prevalent is ***MDMA*** (***ecstasy***), which has annual prevalence rates in 2001 of 9% among twelfth graders, 9% among college students, and 8% among young adults. The ***narcotics other than heroin*** are now also reaching appreciable numbers at 7%, 6%, and 5%, respectively, as are ***tranquilizers*** at 7%, 5%, and 6%, respectively.

In eighth grade, ***inhalants*** are second only to marijuana as the most widely used of the illicitly used drugs. Because of their importance among the younger adolescents, a new index of illicit drug use including inhalants was introduced in Tables 2-1 through 2-2 in recent years. Certainly the use of inhalants reflects a form of illicit, psychoactive drug use; its inclusion makes relatively little difference in the illicit drug index prevalence rates for the older age groups, but considerable difference for the younger ones. For example, in 2001 the proportion of eighth graders reporting any illicit drug use in their lifetime, exclusive of inhalants, was 27%, whereas including inhalants raised the figure to 35%.

- Several additional classes of drugs have been added to the study's coverage in the last year or so, and they are all discussed in Chapter 4 of Volume I. These include ***ketamine, GHB, and Rohypnol,*** so-called "club drugs" (in addition to LSD and ecstasy). In general these drugs have not attained high prevalence rates among eighth, tenth, or twelfth graders: the 2001 annual prevalence rates for ***ketamine*** are 1.3%, 2.1%, and 2.5%, respectively; for ***GHB***, 1.1%, 1.0%, and 1.6%; and for ***Rohypnol***, 0.7%, 1.0%, and 0.9%. There was little change in the use of any of them this year, and for Rohypnol, which has been in the study since 1996, there has been little change since then.

- Two new substances used primarily by males to develop their physique and physical strength were added to the question set in 2001. One is ***androstenedione***, which is a precursor to anabolic steroid and can be purchased over the counter. Among males, where use is heavily concentrated, the annual prevalence rate is quite high, at 1.3%, 3.5%, and 5.3% in grades 8, 10, and 12. (Among females, the rates are 1.0%, 0.9%, and 0.7%.)

- Another physique-enhancing substance that is not a drug, but rather a type of protein supplement, is ***creatine***. Because we thought its use often was combined with the use of steroids and androstenedione, we included a question on its use in 2001 and found prevalence of use to be very high. Among boys, who again are the primary users, annual prevalence for creatine is 5%, 15%, and 22%. (For girls, the rates are 1%, 2%, and 2%.)

- The study has contained a set of questions about the use of non-prescription stimulants for some years, including stay-awake pills, diet pills, and the so-called "look-alikes." The annual prevalence among twelfth graders of over-the-counter ***stay-awake pills***, which usually contain caffeine as their active ingredient, nearly doubled between 1982 and 1990, increasing from 12% to 23%. After 1990 this statistic fell, reaching 15% by 2000, and then increased some in 2001. Earlier decreases also occurred among the college-aged young adult population (ages 19 to 22), in which annual prevalence was 26% in 1989 and declined to 16% in 1999 and 2000—its lowest level since 1986. The rate remains about the same in 2001, at 17%.

  The ***look-alikes*** also have shown some falloff in recent years. Among high school seniors, annual prevalence decreased slightly from 6.8% in 1995 to 5.0% in 1999 but has been increasing since then; among young adults aged 19 to 22, use also declined from 6.0% in 1995 to 3.7% in 2001. Over-the-counter ***diet pills*** have not shown a recent decline. Among high schools seniors, annual prevalence did decline from 1986 to 1995, from 15% to 10%; it stands at 12% in 2001. (Among twelfth-grade girls in 2001, some 24% had tried diet pills by the end of senior year, 16% used them in the past year, and 8% used them in just the past 30 days.) Among young adults aged 19 to 22 there also had been an earlier decline from 1986 to 1995, with annual prevalence moving from 17% to 7%. Use then rose slightly to 9.5% in 2001.

College-Noncollege Differences in Illicit Drug Use

- American college students (defined here as those respondents one to four years past high school who were actively enrolled full-time in a two- or four-year college) show annual usage rates for several categories of drugs that are about average for all high school graduates their age; these categories include ***any illicit drug***, ***marijuana***, ***inhalants***, ***ecstasy*** (***MDMA***), and ***narcotics other than heroin***. For several other categories of drugs, however, college students have rates of use that are below those of their age peers, including ***any illicit drug other than marijuana***, ***hallucinogens***, ***LSD*** specifically, ***cocaine***, ***crack cocaine*** specifically, ***heroin***, ***amphetamines***, ***ice***, ***barbiturates***, and ***tranquilizers***.

- Because college-bound seniors had below-average rates of use on *all* of the illicit drugs while they were in high school, the eventual attainment of parity on many of them reflects some closure of the gap. As results from the study published in a recent book have shown, this college effect of "catching up" is largely explainable in terms of differential rates of leaving the parental home after high school graduation and of getting married. College students are more likely than their age peers to have left the parental home and its constraining influences and less likely to have entered marriage, with its constraining influences.[5]

- In general, the trends since 1980 in illicit substance use among American college students have paralleled those of their age peers not in college. Most drugs showed a period of substantial decline in use sometime after 1980. Further, all young adult high school graduates through age 28, as well as college students taken separately, showed trends highly parallel for the most part to the trends among high school seniors until about 1992. After 1992, a number of drugs showed an increase in use among seniors (as well as eighth and tenth graders), but not among college students and young adults.

  This divergence, combined with the fact that the upturn began first among the eighth graders (in 1992), suggests that cohort effects were emerging for illicit drug use, as we have discussed above. In fact, as those heavier-using cohorts of high school seniors entered the college years, we saw a lagged increase in the use of several drugs in college. For example, annual prevalence reached a low point among twelfth graders in 1992 for a number of drugs (e.g., ***cocaine***, ***amphetamines***, ***barbiturates***, ***tranquilizers***, ***other narcotics***, and ***any illicit drug other than marijuana***) before rising thereafter; among college students, those same drugs reached a low two years later in 1994, and then began to rise gradually. Then, in 1998, as ***marijuana*** use was declining in the three grades of secondary school, we saw a sharp increase among college students. The evidence for cohort effects resulting from generational replacement is impressive and consistent with our earlier predictions.

---

[5] Bachman, J. G., Wadsworth, K. N., O'Malley, P. M., Johnston, L. D., & Schulenberg, J. (1997). *Smoking, drinking, and drug use in young adulthood: The impacts of new freedoms and new responsibilities.* Mahwah, NJ: Lawrence Erlbaum Associates.

Male-Female Differences in Illicit Drug Use

- Regarding gender differences in three older populations (high school seniors, college students, and young adults), males are more likely to use *most illicit drugs*, and the differences tend to be largest at the higher frequency levels. ***Daily marijuana use*** among high school seniors in 2001, for example, is reported by 7.9% of males versus 3.6% of females; among all adults (aged 19 to 32 years) by 5.7% of males versus 3.4% of females; and among college students, specifically, by 5.7% of males versus 3.8% of females.

- In the eighth- and tenth-grade samples there are fewer and smaller gender differences in the use of drugs—perhaps because girls tend to date and then emulate older boys, who are in age groups considerably more likely to use drugs. While the rate of using ***marijuana*** in the past year is slightly higher for boys, the rate for the use of ***any illicit drug other than marijuana*** is slightly higher for girls. There is little male-female difference in eighth and tenth grades in the use of ***cocaine***, ***crack***, and ***heroin***. ***Amphetamine*** use and ***tranquilizer*** use are both slightly higher among females.

TRENDS IN ALCOHOL USE

- Several findings about ***alcohol*** use in these age groups are noteworthy. First, despite the fact that it is illegal for virtually all secondary school students and most college students to purchase alcoholic beverages, experience with alcohol is almost universal among them. That is, alcohol has been tried by 51% of eighth graders, 70% of tenth graders, 80% of twelfth graders, and 86% of college students; and active use is widespread. Most important, perhaps, is the widespread occurrence of ***occasions of heavy drinking***—measured by the percent reporting five or more drinks in a row at least once in the prior two-week period. Among eighth graders this statistic stands at 13%, among tenth graders at 25%, among twelfth graders at 30%, and among college students at 41%. After the early twenties this behavior recedes somewhat with age, reflected by the 36% rate found in the entire young adult sample and the 24% rate found among 31- to 32-year-olds.

- Alcohol use did not increase as use of other illicit drugs decreased among seniors from the late 1970s to the early 1990s, although it was common to hear such a "displacement hypothesis" asserted. This study demonstrates that the opposite seems to be true. After 1980, when illicit drug use was declining, the monthly prevalence of alcohol use among seniors also declined gradually, but substantially, from 72% in 1980 to 51% in 1993. ***Daily alcohol use*** declined from a peak of 6.9% in 1979 to 2.5% in 1993; and the prevalence of drinking ***five or more drinks in a row*** during the prior two-week interval fell from 41% in 1983 to 28% in 1993—nearly a one-third decline. When illicit drug use rose again in the 1990s, there was evidence that alcohol use (particularly binge drinking) was rising some as well—albeit not nearly as sharply as did marijuana use. In the late 1990s, as illicit drug use leveled in secondary schools and began a gradual decline, similar trends are observed for alcohol.

Male-Female Differences in Alcohol Use

- There is a substantial gender difference among high school seniors in the prevalence of ***occasions of heavy drinking*** (24% for females versus 36% for males in 2001); this difference generally had been diminishing very gradually since the study began. (In 1975 there was a 23-percentage-point difference between them, versus a 12-point difference in 2001.)

- As just discussed, there also are substantial gender differences in alcohol use among college students, and young adults generally, with males drinking more. For example, 48% of college males report having ***five or more drinks in a row*** over the previous two weeks versus 36% of college females. There has not been a great deal of change in this gender difference since 1980.

College-Noncollege Differences in Alcohol Use

- The data from college students show a quite different pattern of change in relation to alcohol use than that of twelfth graders or noncollege respondents of the same age. (See Figure 9-14 in Volume II.) From 1980 to 1993, college students showed considerably less drop-off in monthly prevalence of ***alcohol*** use (82% to 70%) than did high school seniors (72% to 51%) and slightly less decline in daily prevalence (6.5% to 3.9%) compared to a decline from 6.0% to 2.5% among high school seniors. ***Occasions of heavy drinking*** also declined less among college students from 1980 to 1993, from 44% to 40%, compared to a decline from 41% to 28% among high school seniors. Among noncollege age-mates, the decline was from 41% to 34%. Thus, because both their noncollege age-mates and high school students were showing greater declines, the college students stood out as having maintained a high rate of binge or party drinking. Since 1993, the college students changed little (41% in 2001—similar to the 40% rate observed in 1993), while their noncollege age-mates increased by 3 percentage points, to 37%; high school seniors increased by 2 percentage points, to 30%. Still, college students stand out as having a relatively high rate of binge or party drinking.

Because the college-bound seniors in high school are consistently less likely to report occasions of heavy drinking than the noncollege-bound, the higher rates of such drinking in college indicate that they "catch up to and pass" their peers in binge drinking after high school graduation.

- Since 1980, college students have generally had ***daily drinking*** rates that were slightly lower than their age peers, suggesting that they were more likely to confine their drinking to weekends, when they tend to drink a lot. College men have much higher rates of daily drinking than college women (7.2% versus 2.9% in 2001). This gender difference is even greater in the noncollege group (8.0% versus 3.1%, respectively).

- The rate of daily drinking fell considerably among the noncollege group, from 8.3% in 1980 to 3.2% in 1994, but by 2000 had risen to 5.8%. Daily drinking by the college group moved from 6.5% to 3.0% in 1995, and stands at 4.7% in 2001.

- Comparisons between the college and noncollege group in terms of binge drinking have typically shown that college students are more likely to engage in this activity. In 2001, it appears that this difference is largely due to females. Females in college have a considerably higher rate (36%) than females in their age group who do not attend college (28%); males in both the college and noncollege settings have similar rates (48% and 49%, respectively.)

TRENDS IN CIGARETTE SMOKING

- Quite a number of very important findings about ***cigarette smoking*** among American adolescents and young adults have emerged during the life of the study. Despite the demonstrated health risks associated with smoking, sizeable and, during the first half of the 1990s, growing proportions of young people continued to establish regular cigarette habits during late adolescence. In fact, since the study began in 1975, cigarettes have consistently comprised the class of abusable substance most frequently used on a daily basis by high school students.

- During most of the 1980s, when smoking rates were falling steadily among adults, we reported that smoking among adolescents was not declining. Then the situation went from bad to worse.

- Among eighth and tenth graders, the current smoking rate increased by about half between 1991 (when their use was first measured) and 1996; and among twelfth graders, the current smoking rate rose by nearly one-third between 1992 (their recent low point) and 1997. This study played an important role in bringing these disturbing increases in adolescent smoking to public attention during those years.

  Fortunately, there have been some important declines in current smoking since 1996 in the case of eighth and tenth graders and since 1997 in the case of twelfth graders. In 2001, 12% of eighth graders, 21% of tenth graders, and 30% of twelfth graders reported smoking one or more cigarettes in the prior 30 days. Thus, despite the recent improvements, at present nearly a third of American young people are current smokers by the time they complete high school; and other research consistently shows that smoking rates are substantially higher among those who drop out before graduating.

  Daily smoking rates also increased by about half among eighth graders (from a low of 7.0% in 1992 to 10.4% in 1996) and tenth graders (from a low of 12.3% in 1992 to 18.3% in 1996), while daily smoking among twelfth graders increased by 43% (from a low of 17.2% in 1992 to 24.6% in 1997). In 1997, we saw the first evidence of a change in the situation, as daily smoking rates declined among eighth graders and leveled among tenth graders. There was a significant decline in tenth and twelfth graders' daily smoking rates by 1998. All three grades have been continuing to decline in use through 2001, including significant declines among eighth and tenth graders. Among college students there was a nearly 50% increase in smoking from 1994 (13%) through 1999 (19%)—reflecting the cohort replacement effect of the heavier smoking senior classes—before a turnaround began in 2000 with a significant decline in 2001 (15%). For high school seniors, during a much earlier period (from 1977 to 1981), there had been a substantial decline in daily smoking, a leveling for nearly a decade (through 1990), and a slight decline in 1991 and 1992. Rates then started up, and the 1998 decline in daily smoking rates was the first decline in use by seniors since 1992. Use rose slightly in 1999, then dropped in 2000 and 2001.

  The dangers perceived to be associated with ***pack-a-day*** smoking differ greatly by grade level and seem to be unrealistically low at all grade levels. Currently, nearly three-quarters of the seniors (73%) report that pack-a-day smokers run a great risk of harming themselves physically or in other ways: more importantly, only 57% of the eighth graders say the same. All three grades showed a decrease in perceived risk between 1993 and 1995, as use was rising rapidly, but a slightly larger and offsetting increase between 1995 and 2000, presaging the subsequent downturn in smoking.

  Disapproval of cigarette smoking had been in decline longer: from 1991 through 1996 among eighth and tenth graders, and from 1992 to 1996 among twelfth graders. Since then there has been an increase in disapproval in all three grades, though it is not yet large enough to offset the earlier decline completely. Undoubtedly the heavy media coverage of the tobacco issue (the proposed settlement with the state attorneys general, the congressional debate, the eventual state settlements, etc.) had an important influence on these attitudes and beliefs. However, that coverage diminished considerably in 1998, raising the question of whether these changes in youth attitudes would continue. It may well be, of course, that the removal of certain kinds of cigarette advertising and promotion, combined with national and state-level anti-smoking campaigns and recent increases in cigarette prices, have served to sustain these changes.

Age and Cohort-Related Differences in Cigarette Smoking

- Initiation of smoking most often occurs in grades six through nine (i.e., at modal ages 11-12 to 14-15), with rather little further initiation after high school, although a number of light smokers make the transition to heavy smoking in the first two years after high school. Analyses presented in this volume and elsewhere have shown that cigarette smoking evidences a clear "cohort effect." That is, if a class (or birth) cohort establishes an unusually high rate of smoking at an early age relative to other cohorts, the rate is likely to remain high throughout the life cycle relative to that of other birth cohorts at equivalent ages.

- As we reported in the "Other Findings from the Study" chapter in the 1986 volume in this series, some 53% of the half-pack-a-day (or more) smokers in senior year said that they had tried to quit smoking and found they could not. Of those who had been daily smokers in twelfth grade, nearly three-quarters were daily smokers seven to nine years later (based on the 1985 follow-up survey), despite the fact that in high school only 5% of them thought they would "definitely" be smoking five years hence. A more recent analysis, based on the 1995 follow-up survey, showed similar results. Nearly two-thirds (63%) of those who had been daily smokers in the twelfth grade were still daily smokers seven to nine years later, although in high school only 3% of them had thought they would "definitely" be smoking five years hence. Clearly, the smoking habit is established at an early age, it is difficult to break for those young people who have it, and young people greatly overrate their own ability to quit. Additional data from the eighth and tenth grade students show us that younger children are even more likely than older ones to underestimate seriously the dangers of smoking.

- The surveys of eighth and tenth graders also show that cigarettes are almost universally available to teens. About two-thirds (68%) of eighth graders and nearly nine-tenths (86%) of tenth graders say that cigarettes are "fairly easy" or "very easy" for them to get, if they want them. Until 1997 there had been little change in reported availability since these questions were first asked in 1992. Over the last five years, however, perceived availability of cigarettes decreased significantly for eighth and tenth graders, quite likely reflecting the impact of new regulations and related enforcement efforts aimed at reducing the sale of cigarettes to children.

College-Noncollege Differences in Cigarette Smoking

- A striking difference in smoking rates has long existed between college-bound and noncollege-bound high school seniors. For example, in 2001 smoking a half-pack or more per day is nearly 2½ times as prevalent among the noncollege-bound seniors (19% versus 8%). Among respondents of college age (one to four years past high school), those not in college show the same dramatically higher rate of smoking than those who are in college, with half-pack-a-day smoking standing at 25% and 8%, respectively. Clearly the differences precede college attendance.

- In the first half of the 1990s, smoking rose some among college students and their same-age peers, although the increases were not as steep for either group as they were among high school seniors. But in 1998 and 1999, while smoking was declining among secondary school students at all grades, smoking increased significantly for college students, no doubt reflecting the cohort effect from earlier, heavier-smoking classes of high school seniors moving into the older age groups. Between 1991 and 1999, the 30-day prevalence of cigarette smoking by college students rose from 23% to 31%, or by about one-third, and daily smoking rose from 14% to 19%—or by about 40%. The year 2000 showed, for the first time in several years, a decline in college student smoking, with this decline continuing in 2001.

Male-Female Differences in Cigarette Smoking

- In the 1970s, high school senior females caught up to, and passed, senior males in their rates of ***current smoking***. Both genders then showed a decline in use followed by a long, fairly level period, with use by females consistently higher, but with the gender difference diminishing. In the early 1990s there was another crossover—rates rose among males and declined among females. Both genders showed increasing use between 1992 and 1997 and then a decline in use since.

  Among college students, females had slightly higher probabilities of being daily smokers from 1980 through 1994—although this long-standing gender difference was not true among their age peers not in college. However, there was a crossover from 1995 through 2000—no doubt an echo of the crossover among seniors in 1991—and beginning in 2001, there is another crossover with smoking rates among college females slightly higher than among males.

RACIAL/ETHNIC COMPARISONS

The three largest ethnic groupings—Whites, African Americans, and Hispanics taken as a group—are examined here, for eighth, tenth, and twelfth graders. (Sample size limitations simply do not allow finer subgroup breakdowns unless many years are combined.) A number of interesting findings emerge in these comparisons, and the reader is referred to Chapters 4 and 5 of Volume I for a full discussion of them.[6]

- African American seniors have consistently shown lower usage rates on most drugs, licit and illicit, than White seniors; this also is true at the lower grade levels where little dropping out of school has yet occurred. The differences are quite large for some drugs, including ***inhalants***, ***LSD***, and ***crack cocaine***, at all three grade levels.

- African American students have a much lower prevalence of 30-day prevalence of ***cigarette smoking*** than White students (13% versus 35% in senior year, in 2001) because their smoking rate continued to decline after 1983, while the rate for White students stabilized for some years. (Smoking rates had been rising among White seniors and African American seniors after 1992, but by 1998 there was a leveling, and since then a reversal, in both groups in all grades.) The White eighth and tenth graders' cigarette use declined significantly in 2001. The only ethnic group not to show a decline in 2001 was the tenth grade African Americans.

- In twelfth grade, ***occasions of heavy drinking*** are much less likely to be reported by African American students (12%) than by White students (35%) or Hispanic students (28%).

- In twelfth grade, of the three racial/ethnic groups, Whites tend to have the highest rates of use on a number of drugs, including ***inhalants***, ***hallucinogens***, ***LSD*** specifically, ***amphetamines***, ***barbiturates***, ***tranquilizers***, ***narcotics other than heroin***, ***alcohol***, ***cigarettes***, and ***smokeless tobacco***.

- However, Hispanics have the highest usage rate in senior year for a number of the most dangerous drugs, for example, ***heroin***, ***cocaine***, and ***crack***. Further, in eighth grade, Hispanics have the highest rates not only on these drugs, but on many of the others, as well. For example, in eighth grade, the annual prevalence of ***marijuana*** for Hispanics is 20%, versus 15% for Whites and African

---

[6] Periodically we publish comparisons that contain a number of the smaller racial/ethnic groups in the population, based on data combined for a number of contiguous years in order to attain adequate sample sizes. The most recent is Bachman, J. G., Wallace, J. M. Jr., O'Malley, P. M., Johnston, L. D., Kurth, C. L., & Neighbors, H. W. (1991). Racial/ethnic differences in smoking, drinking, and illicit drug use among American high school seniors, 1976-1989. *American Journal of Public Health, 81*, 372-377. A sequel article is in press as of this writing: Wallace, J. M., Jr., Bachman J. G., O'Malley, P. M., Johnston, L. D., Schulenberg, J. S., & Cooper, S. M. (in press). Smoking, drinking and drugs: Racial/ethnic differences among American high school seniors, 1976-2000. *Public Health Reports.*

Americans; for ***binge drinking***, 18% for Hispanics, 14% for Whites, and 9% for African Americans. In other words, Hispanics have the highest rates of use for many drugs in eighth grade, but not in twelfth, which suggests that their considerably higher dropout rate (compared to Whites and African Americans) may change their relative ranking by twelfth grade.

- With regard to trends, seniors in all three racial/ethnic groups exhibited the decline in ***cocaine*** use from 1986 through 1992, although the decline was less steep among African American seniors because their earlier increase in use was not as large as the increase among White and Hispanic students.

- For virtually ***all of the illicit drugs***, the three groups have tended to trend in parallel. Because White seniors had achieved the highest level of use on a number of drugs—including ***amphetamines***, ***barbiturates***, and ***tranquilizers***—they also had the largest declines; African Americans have had the lowest rates and, therefore, the smallest declines.

- The important racial/ethnic differences in ***cigarette smoking*** noted earlier among high school seniors have emerged during the life of the study. The three groups were fairly similar in their smoking rates during the mid-1970s, and all three mirrored the general decline in smoking from 1977 through 1981. From 1981 through 1992, however, smoking rates declined very little, if at all, for Whites and Hispanics, but the rates for African Americans continued to decline steadily. As a result, by 1992 the daily smoking rate for African Americans was one-fifth that for Whites. Subsequently, all three ethnic groups of twelfth graders exhibited fairly parallel trends in smoking.

DRUG USE IN EIGHTH GRADE

It may be useful to focus specifically on the youngest age group in the study—the eighth graders, most of whom are 13 or 14 years old—because the exceptional levels of both licit and illicit drug use that they already have attained help illustrate the nation's urgent need to continue to address the substance abuse problems among its young.

- By eighth grade 51% of youngsters report having tried ***alcohol*** (more than just a few sips), and nearly a quarter (23%) say they have already been ***drunk*** at least once.

- More than a third of the eighth graders (37%) have tried ***cigarettes***, and one in eight (12%) say they have smoked in the prior month. Shocking to most adults is the fact that only 57% of eighth graders recognize that there is great risk associated with being a pack-a-day smoker. While an increasing proportion will recognize the risk by twelfth grade, to a considerable degree the horse is already out of the barn by that time, because many will have become smokers.

- ***Smokeless tobacco*** has been tried by 19% of male eighth graders, is used currently by 7% of them, and is used daily by 2.5%. (Rates are much lower among females than among males.)

- Among eighth graders, 1 in 6 (17%) have used ***inhalants***, and 1 in 25 (4%) say they have used them in the past month. This is the only class of drugs for which use is substantially higher in eighth grade than in tenth or twelfth grade.

- ***Marijuana*** has been tried by 1 in every 5 eighth graders (20%) and has been used in the prior month by almost 1 in every 11 (9%).

- A surprisingly large number of eighth-grade students (10%) say they have tried prescription-type ***amphetamines***; 3.2% say they have used them in the prior 30 days.

- Relatively few eighth graders say they have tried most of the ***other illicit drugs*** yet. (This is consistent with the retrospective reports from seniors concerning the grades in which they first used the various drugs.) But the proportions having at least some experience with them is not inconsequential because a 3.3% prevalence rate, for example, on average represents one child in every 30-student classroom. The 2001 eighth-grade proportions reporting experience with the other illicit drugs are ***ecstasy*** (5.2%), ***tranquilizers*** (4.7%), ***LSD*** (3.4%), ***cocaine other than crack*** (3.3%), ***crack*** (3.0%), ***steroids*** (2.8% overall, and 3.8% among males), ***hallucinogens other than LSD*** (1.8%), ***heroin*** (1.7%).

- In total, 15% of all eighth graders in 2001—one in every seven—have tried ***some illicit drug other than marijuana*** (excluding inhalants).

- The very large number of students who have already begun use of the so-called "gateway drugs" (***tobacco***, ***alcohol***, ***inhalants***, and ***marijuana***) suggests that a substantial number of eighth-grade students are already at risk of proceeding further to such drugs as LSD, cocaine, amphetamines, and heroin.

DRUG USE BY AGE 40

Because we have now followed up graduating high school seniors into their forties, we can characterize the drug-using history of today's 40-year-olds. This is important not only because it characterizes how use by these respondents has developed over more than two decades since they left high school, but also because many of them are now themselves the parents of adolescents. Their active use of substances may serve as role-modeling for their children, and their own past experience may complicate their communications with their children regarding drugs. The level of use they have attained is truly impressive. (See Chapter 4 of Volume II for greater detail and discussion.)

- Among 40-year-old high school graduates in 2001, we estimate that nearly four out of five (78%) have tried ***marijuana*** and that over two-thirds (70%) have tried an ***illicit drug other than marijuana*** (estimates adjusted as described in Volume II).

  Their current behavior is far less extreme than those statistics would imply, however. "Only" 1 in 7 (13%) indicates using marijuana in the last 12 months, while 1 in 14 (7%) affirm use of any other illicit drug in that time period. (Their past-month prevalence rates are lower still—8% and 4%, respectively.) At least 1 in 55 40-year-olds (1.8%) is a ***current daily marijuana*** user, though a great many more have been so at some time in the past.

- Quite high proportions have had some experience during their lifetime with several of the specific illicit drugs other than marijuana. These include ***amphetamines*** (52%), ***cocaine*** in any form (44%), ***non-crack forms of cocaine*** (37%), ***tranquilizers*** (37%), ***hallucinogens*** of any type (30%), ***narcotics other than heroin*** (26%), ***barbiturates*** (25%), ***LSD*** (20%), and ***other hallucinogens*** (21%).

- Among the illicit drugs other than marijuana that have been used in just the past year by this age group (outside of medical regimen) are ***cocaine*** (3% annual prevalence), ***tranquilizers*** (4%), ***barbiturates*** (1%), ***narcotics other than heroin*** (2%), ***amphetamines*** (1%), and **ecstasy** (1%). There is virtually no active use being reported by our respondents at this age of ***LSD***, ***other hallucinogens***, ***inhalants***, ***crack***, or ***heroin***. (Of course, we would not expect *heavy* heroin or crack users to have remained in the panel studies.)

- ***Alcohol*** consumption is relatively high at this age, with 66% indicating that they consumed at least one alcoholic drink in the prior 30 days, 8% indicating current ***daily drinking*** (defined as drinking on 20 or more occasions in the prior 30 days), and 26% indicating ***occasional heavy drinking*** (defined as five or more drinks on at least one occasion in the prior two weeks).

- Nearly one in four (23%) 40-year-old high school graduates currently smokes ***cigarettes***. Nearly all of those (one in five, or 20%) currently ***smoke daily***.

SUMMARY AND CONCLUSIONS

We can summarize the findings on trends as follows: over more than a decade—from the late 1970s to the early 1990s—there were very appreciable declines in use of a number of ***illicit drugs*** among twelfth-grade students and even larger declines in their use among American college students and young adults. These substantial improvements—which seem largely explainable in terms of changes in attitudes about drug use, beliefs about the risks of drug use, and peer norms against drug use—have some extremely important policy implications. One is that these various substance-using behaviors among American young people are malleable—they *can* be changed. It has been done before. The second is that demand-side factors appear to have been pivotal in bringing about those changes. The reported levels of availability of marijuana, as reported by high school seniors, has held fairly steady throughout the life of the study. (Moreover, both abstainers and quitters rank availability and price very low on their list of reasons for not using.) And, in fact, the perceived availability of cocaine actually was rising during the beginning of the sharp decline in cocaine and crack use, which occurred when the risks associated with that drug suddenly rose sharply.

However, improvements surely are not inevitable; and, when they occur, they should not be taken for granted. Relapse is always possible and, indeed, just such a "relapse" in the longer-term epidemic occurred during the early to mid-1990s, as the country let down its guard on many fronts. (See Chapter 8 for a more detailed discussion of this point.)

In 1992, eighth graders exhibited a significant increase in annual use of ***marijuana***, ***cocaine***, ***LSD***, and ***hallucinogens other than LSD***, as well as an increase in ***inhalant*** use. (In fact, all five populations showed some increase in ***LSD*** use, continuing a longer-term trend for college students and young adults.) Further, the attitudes and beliefs of seniors regarding drug use began to soften.

In 1993, use of a number of drugs began to rise among tenth and twelfth graders, as well, fulfilling our earlier predictions that we had made based on their eroding beliefs about the dangers of drugs and their attitudes about drug use. Increases occurred in a number of the so-called "gateway drugs"—***marijuana***, ***cigarettes***, and ***inhalants***—increases that we argued boded ill for the use of later drugs in the usual sequence of drug-use involvement. Indeed, the proportion of students reporting the use of ***any illicit drug other than marijuana*** rose steadily after 1991 among eighth and tenth graders and after 1992 among twelfth graders. (This proportion increased by more than half among eighth graders, with annual prevalence rising from 8.4% in 1991 to 13.1% in 1996.) The softening attitudes about ***crack*** and other forms of ***cocaine*** also provided a basis for concern—the use of both increased fairly steadily through 1998.

Over the years, this study has demonstrated that changes in perceived risk and disapproval have been important causes of change in the use of several drugs. These beliefs and attitudes surely are influenced by the amount and nature of public attention paid to the drug issue in the historical period during which young people are growing up. A substantial decline in attention to this issue in the early 1990s very likely helps to explain why the increases in perceived risk and disapproval among students ceased and began to backslide. News coverage of the drug issue plummeted between 1989 and 1993 (although it made a considerable comeback as surveys—including this one—began to document that the problem was worsening again), and the media's *pro bono* placement of ads from the Partnership for a Drug-Free America also fell considerably. (The twelfth graders in this study showed a steady decline in their recalled exposure to such ads and in the judged impact of such ads on their own drug-taking behavior.)

Also, the deterioration in the drug abuse situation first began among our youngest cohorts—perhaps because they had not had the same opportunities for vicarious learning from the adverse drug experiences of people around them and people they learn about through the media. Clearly there was a danger that, as the drug epidemic subsided in the 1980s and early 1990s, newer cohorts would have far less opportunity to learn through informal means about the dangers of drugs—that what we have called a "generational forgetting" of those risks would occur through a process of generational replacement of older, more drug-savvy cohorts with newer, more naive ones. If true, this suggests that as drug use subsides, as it did by the early 1990s, the nation must redouble its efforts to ensure that such naive cohorts learn these lessons about the dangers of drugs through more formal means—from schools, parents, and focused messages in the media, for example—and that this more formalized prevention effort be *institutionalized* so that it will endure for the long term. Clearly, for the foreseeable future, American young people will be aware of the psychoactive potential of a host of drugs and will continue to have access to them. That means that each new generation of young people must learn the reasons that they should *not* use drugs. Otherwise their natural curiosity and desires for new experiences will lead a great many of them to use drugs.

The following facts help to put into perspective the magnitude and variety of substance use problems that presently remain among American young people:

- By the end of eighth grade, nearly four in every ten (35%) American eighth-grade students have tried an ***illicit drug*** (if inhalants are included as an illicit drug), and by twelfth grade, more than half (56%) have done so.

- By their late twenties, over three-fifths (61%) of today's American young adults have tried an ***illicit drug***, and 33% have tried some ***illicit drug other than marijuana*** (usually in addition to marijuana). (These figures do not include inhalants.)

- Today more than one in seven young Americans (15% in 2001) has tried ***cocaine*** by the age of 30, and 8% have tried it by their senior year of high school (i.e., by age 17 or 18). More than one in every twenty-five seniors (3.7%) has tried ***crack***. In the young adult sample, 3.9% have tried crack by age 29-30.

- Over 1 in every 16 high school seniors (5.8%) in 2001 currently smokes ***marijuana daily***. Among young adults aged 19 to 28, the percentage is slightly less (5.0%). Among those same seniors in 2001, 1 in every 5 or 6 (18%) had been daily marijuana smokers at some time for at least a month, and among young adults the comparable figure is one in seven (14.5%).

- Nearly a third of all high school seniors (30%) had consumed ***five or more drinks in a row*** at least once in the two weeks prior to the survey, and such behavior tends to increase among young adults one to four years past high school. The prevalence of such behavior among male college students reaches 48%.

- Nearly one-third (30%) of high school seniors in 2001 were current ***cigarette*** smokers, and 19% already were current daily smokers. In addition, we know from studying previous cohorts that many young adults increase their rates of smoking within a year or so after they leave high school.

- Despite the substantial improvement in this country's drug situation between the late 1970s and the early 1990s, it is still true that this nation's secondary school students and young adults show a level of involvement with illicit drugs that is as great as has been documented in any other industrialized nation in the world.[7] Even by longer-term historical standards in this country, these rates remain extremely high, though in general they are not as high as in the peak years of the epidemic in the late 1970s. Heavy drinking also remains widespread and troublesome; and certainly the continuing initiation of a large, though declining, proportion of young people to cigarette smoking remains a matter of the greatest public health concern.

- Finally, we note the seemingly unending capacity of pharmacological experts and amateurs to discover new substances with abuse potential that can be used to alter mood and consciousness. There is also a great capacity for our young people to discover the abuse potential of existing products, such as Robitussin™, and to "rediscover" older drugs, such as ***LSD*** and ***heroin***. While as a society we have made significant progress on a number of fronts in the fight against drug abuse, we must remain vigilant against the opening of new fronts, as well as the reemergence of trouble on older ones.

- In fact, one of the dynamics that keeps the drug epidemic rolling is the emergence of new drugs, whose hazards are little known. In 1999 we saw this happen with the drug ***ecstasy*** (***MDMA***), the use of which continues to grow. Other drugs like ***Rohypnol***, ***ketamine***, and ***GHB*** have appeared recently and now must be added to the list of drugs under study. The spread of such new drugs appears to be facilitated and hastened today by young people's widespread use of chat rooms and other sites on the Internet. We predict a continuous flow of such new substances onto the scene and believe that the task of rapidly documenting their emergence, establishing their adverse consequences, and quickly demystifying them will remain important means by which policymakers, researchers, and educators deal with the continuing threats posed by such drugs.

---

[7] A recently published report from an international collaborative study, modeled largely after Monitoring the Future, suggests that in 2000 none of the 30 European countries in which national school surveys of 15- to 16-year-olds were conducted had rates of illicit drug use comparable to those observed in the United States. (Heroin was the one important exception.) See Hibell, B., Anderson, B., Ahlström, S., Balakireva, O., Bjarnasson, T., Kokkevi, A., & Morgan, M. (Eds.). (2000). *The 1999 ESPAD report* (The *European School Survey Project on Alcohol and Other Drugs): Alcohol and other drug use among students in 30 European countries.* Stockholm: The Swedish Council for Information on Alcohol and Other Drugs, and the Council of Europe. (See also Chapter 10 for a more detailed description of the results of this study.)

- The drug problem is not an enemy that can be vanquished, as in a war. It is more a recurring and relapsing problem that must be contained to the extent possible on a long-term, ongoing basis. Therefore, it is a problem that requires an ongoing, dynamic response from our society—one that takes into account the continuing generational replacement of our children, the generational forgetting of the dangers of drugs that can occur with that replacement, and the perpetual additional tracking of new abusable substances that will come onto the scene and threaten to lure our young people into involvement with drugs.

TABLE 2-1
Trends in Lifetime Prevalence of Use of Various Drugs for Eighth, Tenth, and Twelfth Graders, College Students, and Young Adults (Ages 19-28)

(Entries are percentages)

	Lifetime											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Any Illicit Drug[a]												
8th Grade	18.7	20.6	22.5	25.7	28.5	31.2	29.4	29.0	28.3	26.8	26.8	0.0
10th Grade	30.6	29.8	32.8	37.4	40.9	45.4	47.3	44.9	46.2	45.6	45.6	+0.1
12th Grade	44.1	40.7	42.9	45.6	48.4	50.8	54.3	54.1	54.7	54.0	53.9	-0.1
College Students	50.4	48.8	45.9	45.5	45.5	47.4	49.0	52.9	53.2	53.7	53.6	-0.1
Young Adults	62.2	60.2	59.6	57.5	57.4	56.4	56.7	57.0	57.4	58.2	58.1	0.0
Any Illicit Drug Other Than Marijuana[a,b]												
8th Grade	14.3	15.6	16.8	17.5	18.8	19.2	17.7	16.9	16.3	15.8	14.8	-1.0
10th Grade	19.1	19.2	20.9	21.7	24.3	25.5	25.0	23.6	24.0	23.1	23.4	+0.3
12th Grade	26.9	25.1	26.7	27.6	28.1	28.5	30.0	29.4	29.4	29.0	28.5	-0.5
College Students	25.8	26.1	24.3	22.0	24.5	22.7	24.4	24.8	25.5	25.8	26.3	+0.6
Young Adults	37.8	37.0	34.6	33.4	32.8	31.0	30.5	29.9	30.2	31.3	31.6	+0.4
Any Illicit Drug Including Inhalants[a,c]												
8th Grade	28.5	29.6	32.3	35.1	38.1	39.4	38.1	37.8	37.2	35.1	34.5	-0.6
10th Grade	36.1	36.2	38.7	42.7	45.9	49.8	50.9	49.3	49.9	49.3	48.8	-0.5
12th Grade	47.6	44.4	46.6	49.1	51.5	53.5	56.3	56.1	56.3	57.0	56.0	-1.1
College Students	52.0	50.3	49.1	47.0	47.0	49.1	50.7	55.4	54.4	54.6	53.1	-1.5
Young Adults	63.4	61.2	61.2	58.5	59.0	58.2	58.4	58.5	58.5	59.5	59.0	-0.5
Marijuana/Hashish												
8th Grade	10.2	11.2	12.6	16.7	19.9	23.1	22.6	22.2	22.0	20.3	20.4	+0.1
10th Grade	23.4	21.4	24.4	30.4	34.1	39.8	42.3	39.6	40.9	40.3	40.1	-0.2
12th Grade	36.7	32.6	35.3	38.2	41.7	44.9	49.6	49.1	49.7	48.8	49.0	+0.2
College Students	46.3	44.1	42.0	42.2	41.7	45.1	46.1	49.9	50.8	51.2	51.0	-0.1
Young Adults	58.6	56.4	55.9	53.7	53.6	53.4	53.8	54.4	54.6	55.1	55.7	+0.6
Inhalants[c,d]												
8th Grade	17.6	17.4	19.4	19.9	21.6	21.2	21.0	20.5	19.7	17.9	17.1	-0.8
10th Grade	15.7	16.6	17.5	18.0	19.0	19.3	18.3	18.3	17.0	16.6	15.2	-1.4
12th Grade	17.6	16.6	17.4	17.7	17.4	16.6	16.1	15.2	15.4	14.2	13.0	-1.2
College Students	14.4	14.2	14.8	12.0	13.8	11.4	12.4	12.8	12.4	12.9	9.6	-3.3s
Young Adults	13.4	13.5	14.1	13.2	14.5	14.1	14.1	14.2	14.2	14.3	12.8	-1.4
Nitrites[e]												
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	1.6	1.5	1.4	1.7	1.5	1.8	2.0	2.7	1.7	0.8	1.9	+1.1s
College Students	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	1.4	1.2	1.3	1.0	—	—	—	—	—	—	—	—

(Table continued on next page)

BEST COPY AVAILABLE

TABLE 2-1 (cont.)
Trends in Lifetime Prevalence of Use of Various Drugs for Eighth, Tenth, and Twelfth Graders, College Students, and Young Adults (Ages 19-28)

	Lifetime											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Hallucinogens[b,d]												
8th Grade	3.2	3.8	3.9	4.3	5.2	5.9	5.4	4.9	4.8	4.6	4.0	-0.7
10th Grade	6.1	6.4	6.8	8.1	9.3	10.5	10.5	9.8	9.7	8.9	7.8	-1.1
12th Grade	9.6	9.2	10.9	11.4	12.7	14.0	15.1	14.1	13.7	13.0	12.8	-0.2
College Students	11.3	12.0	11.8	10.0	13.0	12.6	13.8	15.2	14.8	14.4	14.8	+0.4
Young Adults	15.7	15.7	15.4	15.4	16.1	16.4	16.8	17.4	18.0	18.4	18.3	-0.1
LSD												
8th Grade	2.7	3.2	3.5	3.7	4.4	5.1	4.7	4.1	4.1	3.9	3.4	-0.4
10th Grade	5.6	5.8	6.2	7.2	8.4	9.4	9.5	8.5	8.5	7.6	6.3	-1.2
12th Grade	8.8	8.6	10.3	10.5	11.7	12.6	13.6	12.6	12.2	11.1	10.9	-0.2
College Students	9.6	10.6	10.6	9.2	11.5	10.8	11.7	13.1	12.7	11.8	12.2	+0.4
Young Adults	13.5	13.8	13.6	13.8	14.5	15.0	15.0	15.7	16.2	16.4	16.0	-0.4
Hallucinogens Other Than LSD[b]												
8th Grade	1.4	1.7	1.7	2.2	2.5	3.0	2.6	2.5	2.4	2.3	1.8	-0.5
10th Grade	2.2	2.5	2.8	3.8	3.9	4.7	4.8	5.0	4.7	4.8	4.0	-0.8
12th Grade	3.7	3.3	3.9	4.9	5.4	6.8	7.5	7.1	6.7	6.9	7.0	+0.1
College Students	6.0	5.7	5.4	4.4	6.5	6.5	7.5	8.7	8.8	8.2	10.7	+2.5s
Young Adults	8.4	8.0	7.6	7.4	7.8	7.9	8.5	9.4	9.3	9.9	12.0	+2.1sss
PCP[e]												
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	2.9	2.4	2.9	2.8	2.7	4.0	3.9	3.9	3.4	3.4	3.5	+0.2
College Students	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	3.1	2.0	1.9	2.0	2.2	1.9	2.4	2.7	2.3	2.3	3.1	+0.7
MDMA (Ecstasy)[e,f]												
8th Grade	—	—	—	—	—	3.4	3.2	2.7	2.7	4.3	5.2	+1.0
10th Grade	—	—	—	—	—	5.6	5.7	5.1	6.0	7.3	8.0	+0.7
12th Grade	—	—	—	—	—	6.1	6.9	5.8	8.0	11.0	11.7	+0.7
College Students	2.0	2.9	2.3	2.1	3.1	4.3	4.7	6.8	8.4	13.1	14.7	+1.6
Young Adults	3.2	3.9	3.8	3.8	4.5	5.2	5.1	7.2	7.1	11.6	13.0	+1.3

(Table continued on next page)

BEST COPY AVAILABLE

TABLE 2-1 (cont.)
Trends in Lifetime Prevalence of Use of Various Drugs for Eighth, Tenth, and Twelfth Graders, College Students, and Young Adults (Ages 19-28)

	Lifetime											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Cocaine												
8th Grade	2.3	2.9	2.9	3.6	4.2	4.5	4.4	4.6	4.7	4.5	4.3	-0.2
10th Grade	4.1	3.3	3.6	4.3	5.0	6.5	7.1	7.2	7.7	6.9	5.7	-1.2s
12th Grade	7.8	6.1	6.1	5.9	6.0	7.1	8.7	9.3	9.8	8.6	8.2	-0.4
College Students	9.4	7.9	6.3	5.0	5.5	5.0	5.6	8.1	8.4	9.1	8.6	-0.5
Young Adults	21.0	19.5	16.9	15.2	13.7	12.9	12.1	12.3	12.8	12.7	13.1	+0.4
Crack												
8th Grade	1.3	1.6	1.7	2.4	2.7	2.9	2.7	3.2	3.1	3.1	3.0	-0.2
10th Grade	1.7	1.5	1.8	2.1	2.8	3.3	3.6	3.9	4.0	3.7	3.1	-0.6s
12th Grade	3.1	2.6	2.6	3.0	3.0	3.3	3.9	4.4	4.6	3.9	3.7	-0.2
College Students	1.5	1.7	1.3	1.0	1.8	1.2	1.4	2.2	2.4	2.5	2.0	-0.5
Young Adults	4.8	5.1	4.3	4.4	3.8	3.9	3.6	3.8	4.3	4.6	4.7	+0.1
Other Cocaine[a]												
8th Grade	2.0	2.4	2.4	3.0	3.4	3.8	3.5	3.7	3.8	3.5	3.3	-0.2
10th Grade	3.8	3.0	3.3	3.8	4.4	5.5	6.1	6.4	6.8	6.0	5.0	-1.1
12th Grade	7.0	5.3	5.4	5.2	5.1	6.4	8.2	8.4	8.8	7.7	7.4	-0.3
College Students	9.0	7.6	6.3	4.6	5.2	4.6	5.0	7.4	7.8	8.1	8.3	+0.2
Young Adults	19.8	18.4	15.1	13.9	12.4	11.9	11.3	11.5	11.8	11.7	12.1	+0.4
Heroin[b]												
8th Grade	1.2	1.4	1.4	2.0	2.3	2.4	2.1	2.3	2.3	1.9	1.7	-0.2
10th Grade	1.2	1.2	1.3	1.5	1.7	2.1	2.1	2.3	2.3	2.2	1.7	-0.6s
12th Grade	0.9	1.2	1.1	1.2	1.6	1.8	2.1	2.0	2.0	2.4	1.8	-0.6s
College Students	0.5	0.5	0.6	0.1	0.6	0.7	0.9	1.7	0.9	1.7	1.2	-0.5
Young Adults	0.9	0.9	0.9	0.8	1.1	1.3	1.3	1.6	1.7	1.8	2.0	+0.1
With a needle[i]												
8th Grade	—	—	—	—	1.5	1.6	1.3	1.4	1.6	1.1	1.2	0.0
10th Grade	—	—	—	—	1.0	1.1	1.1	1.2	1.3	1.0	0.8	-0.2
12th Grade	—	—	—	—	0.7	0.8	0.9	0.8	0.9	0.8	0.7	-0.1
College Students	—	—	—	—	0.4	0.1	0.2	0.5	0.8	0.7	0.2	-0.5
Young Adults	—	—	—	—	0.4	0.4	0.3	0.4	0.6	0.4	0.6	+0.1
Without a needle[i]												
8th Grade	—	—	—	—	1.5	1.6	1.4	1.5	1.4	1.3	1.1	-0.2
10th Grade	—	—	—	—	1.1	1.7	1.7	1.7	1.6	1.7	1.3	-0.4s
12th Grade	—	—	—	—	1.4	1.7	2.1	1.6	1.8	2.4	1.5	-0.9ss
College Students	—	—	—	—	0.5	1.0	1.2	2.1	1.0	2.5	1.3	-1.1
Young Adults	—	—	—	—	0.9	1.3	1.5	1.7	1.9	2.1	2.1	0.0
Other Narcotics[j]												
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	6.6	6.1	6.4	6.6	7.2	8.2	9.7	9.8	10.2	10.6	9.9	-0.8
College Students	7.3	7.3	6.2	5.1	7.2	5.7	8.2	8.7	8.7	8.9	11.0	+2.1
Young Adults	9.3	8.9	8.1	8.2	9.0	8.3	9.2	9.1	9.5	10.0	11.5	+1.5ss

(Table continued on next page)

TABLE 2-1 (cont.)
Trends in Lifetime Prevalence of Use of Various Drugs for Eighth, Tenth, and Twelfth Graders, College Students, and Young Adults (Ages 19-28)

	Lifetime											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Amphetamines[j]												
8th Grade	10.5	10.8	11.8	12.3	13.1	13.5	12.3	11.3	10.7	9.9	10.2	+0.3
10th Grade	13.2	13.1	14.9	15.1	17.4	17.7	17.0	16.0	15.7	15.7	16.0	+0.3
12th Grade	15.4	13.9	15.1	15.7	15.3	15.3	16.5	16.4	16.3	15.6	16.2	+0.6
College Students	13.0	10.5	10.1	9.2	10.7	9.5	10.6	10.6	11.9	12.3	12.4	+0.1
Young Adults	22.4	20.2	18.7	17.1	16.6	15.3	14.6	14.3	14.1	15.0	15.0	-0.1
Methamphetamine[k,l]												
8th Grade	—	—	—	—	—	—	—	—	4.5	4.2	4.4	+0.2
10th Grade	—	—	—	—	—	—	—	—	7.3	6.9	6.4	-0.5
12th Grade	—	—	—	—	—	—	—	—	8.2	7.9	6.9	-0.9
College Students	—	—	—	—	—	—	—	—	7.1	5.1	5.3	+0.2
Young Adults	—	—	—	—	—	—	—	—	8.8	9.3	9.0	-0.3
Ice[l]												
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	3.3	2.9	3.1	3.4	3.9	4.4	4.4	5.3	4.8	4.0	4.1	+0.1
College Students	1.3	0.6	1.6	1.3	1.0	0.8	1.6	2.2	2.8	1.3	2.3	+1.0
Young Adults	2.9	2.2	2.7	2.5	2.1	3.1	2.5	3.4	3.3	3.9	4.0	+0.1
Barbiturates[j]												
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	6.2	5.5	6.3	7.0	7.4	7.6	8.1	8.7	8.9	9.2	8.7	-0.5
College Students	3.5	3.8	3.5	3.2	4.0	4.6	5.2	5.7	6.7	6.9	6.0	-0.9
Young Adults	8.2	7.4	6.5	6.4	6.7	6.6	6.5	6.9	7.4	8.1	7.8	-0.3
Tranquilizers[h,j]												
8th Grade	3.8	4.1	4.4	4.6	4.5	5.3	4.8	4.6	4.4	4.4	4.7	+0.3
10th Grade	5.8	5.9	5.7	5.4	6.0	7.1	7.3	7.8	7.9	8.0	8.1	+0.1
12th Grade	7.2	6.0	6.4	6.6	7.1	7.2	7.8	8.5	9.3	8.9	9.2	+0.4
College Students	6.8	6.9	6.3	4.4	5.4	5.3	6.9	7.7	8.2	8.8	9.7	+0.9
Young Adults	11.8	11.3	10.5	9.9	9.7	9.3	8.6	9.6	9.6	10.5	11.9	+1.3s
Rohypnol[a,m]												
8th Grade	—	—	—	—	—	1.5	1.1	1.4	1.3	1.0	1.1	+0.1
10th Grade	—	—	—	—	—	1.5	1.7	2.0	1.8	1.3	1.5	+0.2
12th Grade	—	—	—	—	—	1.2	1.8	3.0	2.0	1.5	1.7	+0.3
College Students	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—

(Table continued on next page)

BEST COPY AVAILABLE

TABLE 2-1 (cont.)
Trends in Lifetime Prevalence of Use of Various Drugs for Eighth, Tenth, and Twelfth Graders, College Students, and Young Adults (Ages 19-28)

	Lifetime											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Alcohol[p]												
Any use												
8th Grade	70.1	69.3	67.1	—	—	—	—	—	—	—	—	—
			55.7	55.8	54.5	55.3	53.8	52.5	52.1	51.7	50.5	-1.2
10th Grade	83.8	82.3	80.8	—	—	—	—	—	—	—	—	—
			71.6	71.1	70.5	71.8	72.0	69.8	70.6	71.4	70.1	-1.3
12th Grade	88.0	87.5	87.0	—	—	—	—	—	—	—	—	—
			80.0	80.4	80.7	79.2	81.7	81.4	80.0	80.3	79.7	-0.6
College Students	93.6	91.8	89.3	88.2	88.5	88.4	87.3	88.5	88.0	86.6	86.1	-0.5
Young Adults	94.1	93.4	92.1	91.2	91.6	91.2	90.7	90.6	90.2	90.7	89.9	-0.8
Been Drunk[l]												
8th Grade	26.7	26.8	26.4	25.9	25.3	26.8	25.2	24.8	24.8	25.1	23.4	-1.7
10th Grade	50.0	47.7	47.9	47.2	46.9	48.5	49.4	46.7	48.9	49.3	48.2	-1.1
12th Grade	65.4	63.4	62.5	62.9	63.2	61.8	64.2	62.4	62.3	62.3	63.9	+1.6
College Students	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—
Cigarettes												
Any use												
8th Grade	44.0	45.2	45.3	46.1	46.4	49.2	47.3	45.7	44.1	40.5	36.6	-3.9sss
10th Grade	55.1	53.5	56.3	56.9	57.6	61.2	60.2	57.7	57.6	55.1	52.8	-2.3s
12th Grade	63.1	61.8	61.9	62.0	64.2	63.5	65.4	65.3	64.6	62.5	61.0	-1.5
College Students	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—
Smokeless Tobacco[a,a]												
8th Grade	22.2	20.7	18.7	19.9	20.0	20.4	16.8	15.0	14.4	12.8	11.7	-1.1
10th Grade	28.2	26.6	28.1	29.2	27.6	27.4	26.3	22.7	20.4	19.1	19.5	+0.4
12th Grade	—	32.4	31.0	30.7	30.9	29.8	25.3	26.2	23.4	23.1	19.7	-3.4
College Students	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—
Steroids[l]												
8th Grade	1.9	1.7	1.6	2.0	2.0	1.8	1.8	2.3	2.7	3.0	2.8	-0.2
10th Grade	1.8	1.7	1.7	1.8	2.0	1.8	2.0	2.0	2.7	3.5	3.5	0.0
12th Grade	2.1	2.1	2.0	2.4	2.3	1.9	2.4	2.7	2.9	2.5	3.7	+1.2s
College Students	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	1.7	1.9	1.5	1.3	1.5	1.5	1.4	1.4	1.9	1.4	1.4	0.0

NOTES: Level of significance of difference between the two most recent classes:
s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.

SOURCE: The Monitoring the Future Study, the University of Michigan.

Footnotes for Table 2-1 to Table 2-3

Approximate Weighted Ns	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
8th Graders	17,500	18,600	18,300	17,300	17,500	17,800	18,600	18,100	16,700	16,700	16,200
10th Graders	14,800	14,800	15,300	15,800	17,000	15,600	15,500	15,000	13,600	14,300	14,000
12th Graders	15,000	15,800	16,300	15,400	15,400	14,300	15,400	15,200	13,600	12,800	12,800
College Students	1,410	1,490	1,490	1,410	1,450	1,450	1,480	1,440	1,440	1,350	1,340
Young Adults	6,600	6,800	6,700	6,500	6,400	6,300	6,400	6,200	6,000	5,700	5,800

[a] For 12th graders, college students, and young adults only: Use of "any illicit drug" includes any use of marijuana, LSD, other hallucinogens, crack, other cocaine, or heroin, or any use of other narcotics, amphetamines, barbiturates, or tranquilizers not under a doctor's orders. For 8th and 10th graders only: The use of other narcotics and barbiturates has been excluded, because these younger respondents appear to overreport use (perhaps because they include the use of nonprescription drugs in their answers).

[b] In 2001 the question text was changed on half of the questionnaire forms for each grade. "Other psychedelics" was changed to "other hallucinogens" and "shrooms" was added to the list of examples. For the tranquilizer list of examples, Miltown was replaced with Xanax. The 2000 data presented here are based on all forms. For 8th, 10th, and 12th graders only: The 2001 estimates are based on the unchanged forms only; N is one-half of N indicated. The change score given is the difference between the unchanged forms only in both 2000 and 2001. Data for "any illicit drugs other than marijuana" and "hallucinogens" are also affected by these changes.

[c] For 12th graders, college students, and young adults only: Data based on five of six forms in 1991–98; N is five-sixths of N indicated. Data based on three of six forms beginning in 1999; N is three-sixths of N indicated.

[d] Inhalants are unadjusted for underreporting of amyl and butyl nitrites; hallucinogens are unadjusted for underreporting of PCP.

[e] For 12th graders only: Data based on one of six forms; N is one-sixth of N indicated. For college students and young adults only: Data based on two of six forms; N is one-third of N indicated. Questions about nitrite use were dropped from the college student and young adult questionnaires in 1995. Questions about smokeless tobacco use were dropped from the college student and young adult analyses in 1989.

[f] For 8th and 10th graders only: Data based on one of two forms in 1996; N is one-half of N indicated. Beginning in 1997, data based on one-third of N indicated due to changes in the questionnaire forms.

[g] For 12th graders, college students, and young adults only: Data based on four of six forms; N is four-sixths of N indicated for each group.

[h] In 1995, the heroin question was changed in three of six forms for 12th graders and in one of two forms for 8th and 10th graders. Separate questions were asked for use with injection and without injection. In 1996, the heroin question was changed in all remaining 8th and 10th grade forms. Data presented here represent the combined data from all forms.

[i] For 8th and 10th graders only: Data based on one of two forms in 1995; N is one-half of N indicated. Data based on all forms beginning in 1996. For 12th graders only: Data based on three of six forms; N is three-sixths of N indicated.

[j] Only drug use which was not under a doctor's orders is included here.

[k] For 8th and 10th graders only: Data based on one of four forms; N is one-third of N indicated.

[l] For 12th graders, college students, and young adults only: Data based on two of six forms; N is two-sixths of N indicated for each group.

[m] For 8th and 10th graders only: Data based on one of two forms in 1996; N is one-half of N indicated. Data based on three of four forms in 1997–98; N is two-thirds of N indicated. Data based on two of four forms beginning in 1999; N is one-third of N indicated.

[n] For 8th, 10th, and 12th graders only: In 1993, the question text was changed slightly in half of the forms to indicate that a "drink" meant "more than just a few sips." The data in the upper line for alcohol came from forms using the original wording, while the data in the lower line came from forms using the revised wording. In 1993, each line of data was based on one of two forms for the 8th and 10th graders and on three of six forms for the 12th graders. N is one-half of N indicated for these groups. Beginning in 1994, data based on all forms for all grades. For college students and young adults, the revision of the question text resulted in rather little change in the reported prevalence of use. The data for all forms are used to provide the most reliable estimate of change.

[o] For 8th and 10th graders only: Data based on one of two forms for 1991–96 and on two of four forms beginning in 1997; N is one-half of N indicated.

[p] For 12th graders only: Data based on two of six forms in 2000; N is two-sixths of N indicated. Data based on three of six forms beginning in 2001; N is three-sixths of N indicated.

[q] Daily used is defined as use on twenty or more occasions in the past thirty days except for cigarettes and smokeless tobacco, for which actual daily use is measured, and for 5+ drinks, for which the prevalence of having five or more drinks in a row in the last two weeks is measured.

TABLE 2-2
Trends in Annual and 30-Day Prevalence of Use of Various Drugs for Eighth, Tenth, and Twelfth Graders, College Students, and Young Adults (Ages 19-28)

	Annual												30-Day											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Any Illicit Drug[a]																								
8th Grade	11.3	12.9	15.1	18.5	21.4	23.6	22.1	21.0	20.5	19.5	19.5	0.0	5.7	6.8	8.4	10.9	12.4	14.6	12.9	12.1	12.2	11.9	11.7	-0.2
10th Grade	21.4	20.4	24.7	30.0	33.3	37.5	38.5	35.0	35.9	36.4	37.2	+0.8	11.6	11.0	14.0	18.5	20.2	23.2	23.0	21.5	22.1	22.5	22.7	+0.2
12th Grade	29.4	27.1	31.0	35.8	39.0	40.2	42.4	41.4	42.1	40.9	41.4	+0.6	16.4	14.4	18.3	21.9	23.8	24.6	26.2	25.6	25.9	24.9	25.7	+0.8
College Students	29.2	30.6	30.6	31.4	33.5	34.2	34.1	37.8	36.9	36.1	37.9	+1.8	15.2	16.1	15.1	16.0	19.1	17.6	19.2	19.7	21.6	21.5	21.9	+0.4
Young Adults	27.0	28.3	28.4	28.4	29.8	29.2	29.2	29.9	30.3	30.8	32.1	+1.3	15.1	14.8	14.9	15.3	15.8	15.8	16.4	16.1	17.1	18.1	18.8	+0.7
Any Illicit Drug Other Than Marijuana[a,b]																								
8th Grade	8.4	9.3	10.4	11.3	12.6	13.1	11.8	11.0	10.5	10.2	9.9	-0.2	3.8	4.7	5.3	5.6	6.5	6.9	6.0	5.5	5.5	5.6	5.5	-0.1
10th Grade	12.2	12.3	13.9	15.2	17.5	18.4	18.2	16.6	16.7	16.7	16.8	+0.1	5.5	5.7	6.5	7.1	8.9	8.9	8.8	8.6	8.6	8.5	8.7	+0.2
12th Grade	16.2	14.9	17.1	18.0	19.4	19.8	20.7	20.2	20.7	20.4	19.8	-0.6	7.1	6.3	7.9	8.8	10.0	9.5	10.7	10.7	10.4	10.4	10.8	+0.4
College Students	13.2	13.1	12.5	12.2	15.9	12.8	15.8	14.0	15.4	15.6	16.4	+0.8	4.3	4.6	5.4	4.6	6.3	4.5	6.8	6.1	6.4	6.9	7.5	+0.5
Young Adults	14.3	14.1	13.0	13.0	13.8	13.2	13.6	13.2	13.7	14.9	15.4	+0.5	5.4	5.5	4.9	5.3	5.7	4.7	5.5	5.5	6.0	6.4	7.0	+0.6
Any Illicit Drug Including Inhalants[a,c]																								
8th Grade	16.7	18.2	21.1	24.2	27.1	28.7	27.2	26.2	25.3	24.0	23.9	-0.1	8.8	10.0	12.0	14.3	16.1	17.5	16.0	14.9	15.1	14.4	14.0	-0.4
10th Grade	23.9	23.5	27.4	32.5	35.6	39.6	40.3	37.1	37.7	38.0	38.7	+0.7	13.1	12.6	15.5	20.0	21.6	24.5	24.1	22.5	23.1	23.6	23.6	+0.1
12th Grade	31.2	28.8	32.5	37.6	40.2	41.9	43.3	42.4	42.8	42.5	42.6	+0.1	17.8	15.5	19.3	23.0	24.8	25.5	26.9	26.6	26.4	26.4	26.5	+0.1
College Students	29.8	31.1	31.7	31.9	33.7	35.1	35.5	39.1	37.4	37.0	38.2	+1.2	15.1	16.5	15.7	16.4	19.6	18.0	19.6	21.0	21.8	22.6	21.9	-0.7
Young Adults	27.8	29.2	28.9	29.2	30.4	30.2	30.1	30.6	30.6	31.2	33.2	+2.0	15.4	15.3	15.1	16.1	16.1	16.4	16.9	16.7	17.4	18.8	19.2	+0.4
Marijuana/Hashish																								
8th Grade	6.2	7.2	9.2	13.0	15.8	18.3	17.7	16.9	16.5	15.6	15.4	-0.1	3.2	3.7	5.1	7.8	9.1	11.3	10.2	9.7	9.7	9.1	9.2	+0.1
10th Grade	16.5	15.2	19.2	25.2	28.7	33.6	34.8	31.1	32.1	32.2	32.7	+0.5	8.7	8.1	10.9	15.8	17.2	20.4	20.5	18.7	19.4	19.7	19.8	0.0
12th Grade	23.9	21.9	26.0	30.7	34.7	35.8	38.5	37.5	37.8	36.5	37.0	+0.5	13.8	11.9	15.5	19.0	21.2	21.9	23.7	22.8	23.1	21.6	22.4	+0.8
College Students	26.5	27.7	27.9	29.3	31.2	33.1	31.6	35.9	35.2	34.0	35.6	+1.6	14.1	14.6	14.2	15.1	18.6	17.5	17.7	18.6	20.7	20.0	20.2	+0.1
Young Adults	23.8	25.2	25.1	25.5	26.5	27.0	26.8	27.4	27.6	27.9	29.2	+1.2	13.5	13.3	13.4	14.1	14.0	15.1	15.0	14.9	15.6	16.1	16.7	+0.6
Inhalants[a,d]																								
8th Grade	9.0	9.5	11.0	11.7	12.8	12.2	11.8	11.1	10.3	9.4	9.1	-0.3	4.4	4.7	5.4	5.6	6.1	5.8	5.6	4.8	5.0	4.5	4.0	-0.5
10th Grade	7.1	7.5	8.4	9.1	9.6	9.5	8.7	8.0	7.2	7.3	6.6	-0.7	2.7	2.7	3.3	3.6	3.5	3.3	3.0	2.9	2.6	2.6	2.4	-0.1
12th Grade	6.6	6.2	7.0	7.7	8.0	7.6	6.7	6.2	5.6	5.9	4.5	-1.4s	2.4	2.3	2.5	2.7	3.2	2.5	2.5	2.3	2.0	2.2	1.7	-0.5
College Students	3.5	3.1	3.8	3.0	3.9	3.6	4.1	3.0	3.2	2.9	2.8	-0.2	0.9	1.1	1.3	0.6	1.6	0.8	0.3	0.6	1.5	0.9	0.4	-0.5
Young Adults	2.0	1.9	2.1	2.1	2.4	2.2	2.3	2.1	2.3	2.1	1.7	-0.4	0.5	0.6	0.7	0.5	0.7	0.5	0.5	0.7	0.8	0.5	0.4	-0.1
Nitrites[e]																								
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	0.9	0.5	0.9	1.1	1.1	1.6	1.2	1.4	0.9	0.6	0.6	0.0	0.4	0.3	0.6	0.4	0.4	0.7	0.7	1.0	0.4	0.3	0.5	+0.2
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	0.2	0.1	0.4	0.3	—	—	—	—	—	—	—	—	*	0.1	0.2	0.1	—	—	—	—	—	—	—	—

(Table continued on next page)

TABLE 2-2 (cont.)

Trends in Annual and 30-Day Prevalence of Use of Various Drugs for Eighth, Tenth, and Twelfth Graders, College Students, and Young Adults (Ages 19-28)

	Annual												30-Day											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Hallucinogens[b,d]																								
8th Grade	1.9	2.5	2.6	2.7	3.6	4.1	3.7	3.4	2.9	2.8	2.5	-0.4	0.8	1.1	1.2	1.3	1.7	1.9	1.8	1.4	1.3	1.2	1.2	0.0
10th Grade	4.0	4.3	4.7	5.8	7.2	7.8	7.6	6.9	6.9	6.1	5.2	-0.9	1.6	1.8	1.9	2.4	3.3	2.8	3.3	3.2	2.9	2.3	2.1	-0.2
12th Grade	5.8	5.9	7.4	7.6	9.3	10.1	9.8	9.0	9.4	8.1	8.4	+0.2	2.2	2.1	2.7	3.1	4.4	3.5	3.9	3.8	3.5	2.6	3.2	+0.6
College Students	6.3	6.8	6.0	6.2	8.2	6.9	7.7	7.2	7.8	6.7	7.5	+0.8	1.2	2.3	2.5	2.1	3.3	1.9	2.1	2.1	2.0	1.4	1.8	+0.4
Young Adults	4.5	5.0	4.5	4.8	5.6	5.6	5.9	5.2	5.4	5.4	5.4	-0.1	1.1	1.5	1.2	1.4	1.7	1.2	1.5	1.4	1.3	1.2	1.2	0.0
LSD																								
8th Grade	1.7	2.1	2.3	2.4	3.2	3.5	3.2	2.8	2.4	2.4	2.2	-0.3	0.6	0.9	1.0	1.1	1.4	1.5	1.5	1.1	1.1	1.0	1.0	0.0
10th Grade	3.7	4.0	4.2	5.2	6.5	6.9	6.7	5.9	6.0	5.1	4.1	-1.0s	1.5	1.6	1.6	2.0	3.0	2.4	2.8	2.7	2.3	1.6	1.5	-0.2
12th Grade	5.2	5.6	6.8	6.9	8.4	8.8	8.4	7.6	8.1	6.6	6.6	0.0	1.9	2.0	2.4	2.6	4.0	2.5	3.1	3.2	2.7	1.6	2.3	+0.7s
College Students	5.1	5.7	5.1	5.2	6.9	5.2	5.0	4.4	5.4	4.3	4.0	-0.3	0.8	1.8	1.6	1.8	2.5	0.9	1.1	1.5	1.2	0.9	1.0	+0.1
Young Adults	3.8	4.3	3.8	4.0	4.6	4.5	4.4	3.5	4.0	3.7	3.4	-0.3	0.8	1.1	0.8	1.1	1.3	0.7	0.9	1.0	0.8	0.8	0.7	0.0
Hallucinogens Other Than LSD[b]																								
8th Grade	0.7	1.1	1.0	1.3	1.7	2.0	1.8	1.6	1.5	1.4	1.1	-0.3	0.3	0.4	0.5	0.7	0.8	0.9	0.7	0.7	0.6	0.6	0.6	0.0
10th Grade	1.3	1.4	1.9	2.4	2.8	3.3	3.3	3.4	3.2	3.1	2.8	-0.4	0.4	0.5	0.7	1.0	1.0	1.0	1.2	1.4	1.2	1.2	1.1	-0.2
12th Grade	2.0	1.7	2.2	3.1	3.8	4.4	4.6	4.6	4.3	4.4	4.4	0.0	0.7	0.5	0.8	1.2	1.3	1.6	1.7	1.6	1.6	1.7	1.8	+0.1
College Students	3.1	2.6	2.7	2.8	4.0	4.1	4.9	4.4	4.5	4.4	5.5	+1.1	0.6	0.7	1.1	0.8	1.6	1.2	1.2	0.7	1.2	0.8	0.8	0.0
Young Adults	1.7	1.9	1.9	2.0	2.5	2.8	3.1	3.0	3.0	3.4	3.5	+0.1	0.3	0.5	0.6	0.6	0.6	0.6	0.7	0.5	0.6	0.7	0.6	-0.1
PCP[c]																								
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	1.4	1.4	1.4	1.6	1.8	2.6	2.3	2.1	1.8	2.3	1.8	-0.5	0.5	0.6	1.0	0.7	0.6	1.3	0.7	1.0	0.8	0.9	0.5	-0.4
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	0.3	0.3	0.2	0.3	0.3	0.2	0.5	0.6	0.6	0.3	0.6	+0.3	0.1	0.2	0.2	0.1	0.0	0.1	0.1	0.2	0.2	0.0	0.0	0.0
MDMA (Ecstasy)[a,f]																								
8th Grade	—	—	—	—	—	2.3	2.3	1.8	1.7	3.1	3.5	+0.5	—	—	—	—	—	1.0	1.0	0.9	0.8	1.4	1.8	+0.4
10th Grade	—	—	—	—	—	4.6	3.9	3.3	4.4	5.4	6.2	+0.8	—	—	—	—	—	1.8	1.3	1.3	1.8	2.6	2.6	0.0
12th Grade	—	—	—	—	—	4.6	4.0	3.6	5.6	8.2	9.2	+1.0	—	—	—	—	—	2.0	1.6	1.5	2.5	3.6	2.8	-0.9
College Students	0.9	2.0	0.8	0.5	2.4	2.8	2.4	3.9	5.5	9.1	9.2	+0.2	0.2	0.4	0.3	0.2	0.7	0.7	0.8	0.8	2.1	2.5	1.5	-0.9
Young Adults	0.8	1.0	0.8	0.7	1.6	1.7	2.1	2.9	3.6	7.2	7.5	+0.3	0.1	0.3	0.3	0.2	0.4	0.3	0.6	0.8	1.3	1.9	1.8	-0.1
Cocaine																								
8th Grade	1.1	1.5	1.7	2.1	2.6	3.0	2.8	3.1	2.7	2.6	2.5	-0.1	0.5	0.7	0.7	1.0	1.2	1.3	1.1	1.4	1.3	1.2	1.2	-0.1
10th Grade	2.2	1.9	2.1	2.8	3.5	4.2	4.7	4.7	4.9	4.4	3.6	-0.8	0.7	0.7	0.9	1.2	1.7	1.7	2.0	2.1	1.8	1.8	1.3	-0.4
12th Grade	3.5	3.1	3.3	3.6	4.0	4.9	5.5	5.7	6.2	5.0	4.8	-0.1	1.4	1.3	1.3	1.5	1.8	2.0	2.3	2.4	2.6	2.1	2.1	-0.1
College Students	3.6	3.0	2.7	2.0	3.6	2.9	3.4	4.6	4.6	4.8	4.7	0.0	1.0	1.0	0.7	0.6	0.7	0.8	1.6	1.6	1.2	1.4	1.9	+0.5
Young Adults	6.2	5.7	4.7	4.3	4.4	4.1	4.7	4.9	5.4	5.4	5.8	+0.4	2.0	1.8	1.4	1.3	1.5	1.2	1.6	1.7	1.9	1.7	2.2	+0.6s
Crack																								
8th Grade	0.7	0.9	1.0	1.3	1.6	1.8	1.7	2.1	1.8	1.8	1.7	-0.1	0.3	0.5	0.4	0.7	0.7	0.8	0.7	0.9	0.8	0.8	0.8	0.0
10th Grade	0.9	0.9	1.1	1.4	1.8	2.1	2.2	2.5	2.4	2.2	1.8	-0.4	0.3	0.4	0.5	0.6	0.9	0.8	0.9	1.1	0.8	0.9	0.7	-0.2
12th Grade	1.5	1.5	1.5	1.9	2.1	2.1	2.4	2.5	2.7	2.2	2.1	0.0	0.7	0.6	0.7	0.8	1.0	1.0	0.9	1.0	1.1	1.0	1.1	+0.1
College Students	0.5	0.4	0.6	0.5	1.1	0.6	0.4	1.0	0.9	0.9	0.9	0.0	0.3	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.1	-0.2
Young Adults	1.2	1.4	1.3	1.1	1.1	1.1	1.0	1.1	1.4	1.2	1.3	+0.1	0.4	0.4	0.4	0.3	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.0

(Table continued on next page)

BEST COPY AVAILABLE

TABLE 2-2 (cont.)
Trends in Annual and 30-Day Prevalence of Use of Various Drugs for Eighth, Tenth, and Twelfth Graders, College Students, and Young Adults (Ages 19-28)

	Annual												30-Day											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Other Cocaine[g]																								
8th Grade	1.0	1.2	1.3	1.7	2.1	2.5	2.2	2.4	2.3	1.9	1.9	0.0	0.5	0.5	0.6	0.9	1.0	1.0	0.8	1.0	1.1	0.9	0.9	+0.1
10th Grade	2.1	1.7	1.8	2.4	3.0	3.5	4.1	4.0	4.4	3.8	3.0	-0.8s	0.6	0.6	0.7	1.0	1.4	1.3	1.6	1.8	1.6	1.6	1.2	-0.4
12th Grade	3.2	2.6	2.9	3.0	3.4	4.2	5.0	4.9	5.8	4.5	4.4	-0.1	1.2	1.0	1.2	1.3	1.3	1.6	2.0	2.0	2.5	1.7	1.8	+0.1
College Students	3.2	2.4	2.5	1.8	3.3	2.3	3.0	4.2	4.2	4.1	4.1	0.0	1.0	0.9	0.6	0.3	0.8	0.6	1.3	1.5	1.0	0.9	1.5	+0.6
Young Adults	5.4	5.1	3.9	3.6	3.9	3.8	4.3	4.5	4.8	4.8	5.3	+0.4	1.8	1.7	1.1	1.0	1.3	1.1	1.5	1.5	1.6	1.5	1.8	+0.4
Heroin[h]																								
8th Grade	0.7	0.7	0.7	1.2	1.4	1.6	1.3	1.3	1.4	1.1	1.0	-0.1	0.3	0.4	0.4	0.6	0.6	0.7	0.6	0.6	0.6	0.5	0.6	+0.1
10th Grade	0.5	0.6	0.7	0.9	1.1	1.2	1.4	1.4	1.4	1.4	0.9	-0.4ss	0.2	0.2	0.3	0.4	0.6	0.5	0.6	0.7	0.7	0.5	0.3	-0.2
12th Grade	0.4	0.6	0.5	0.6	1.1	1.0	1.2	1.0	1.1	1.5	0.9	-0.6sss	0.2	0.3	0.2	0.3	0.6	0.5	0.5	0.5	0.5	0.7	0.4	-0.3ss
College Students	0.1	0.1	0.1	0.1	0.3	0.4	0.3	0.6	0.2	0.5	0.4	-0.2	0.1	0.0	*	0.0	0.1	*	0.2	0.1	0.1	0.2	0.1	-0.1
Young Adults	0.1	0.2	0.2	0.1	0.4	0.4	0.3	0.4	0.4	0.4	0.5	+0.1	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	+0.1
With a needle[i]																								
8th Grade	—	—	—	—	0.9	1.0	0.8	0.8	0.9	0.6	0.7	+0.1	—	—	—	—	0.4	0.5	0.4	0.5	0.4	0.3	0.4	0.0
10th Grade	—	—	—	—	0.6	0.7	0.7	0.8	0.6	0.5	0.4	-0.1	—	—	—	—	0.3	0.3	0.3	0.4	0.3	0.3	0.2	-0.1
12th Grade	—	—	—	—	0.5	0.5	0.5	0.4	0.4	0.4	0.3	-0.1	—	—	—	—	0.3	0.4	0.3	0.2	0.2	0.2	0.2	-0.1
College Students	—	—	—	—	0.1	0.0	0.1	0.2	0.1	0.1	0.1	0.0	—	—	—	—	0.0	0.0	0.1	0.0	0.1	0.1	0.0	-0.1
Young Adults	—	—	—	—	0.1	0.1	0.1	0.1	0.1	*	0.3	+0.2	—	—	—	—	0.0	0.0	0.1	*	0.1	*	0.2	+0.2
Without a needle[i]																								
8th Grade	—	—	—	—	0.8	1.0	0.8	0.8	0.9	0.7	0.6	-0.1	—	—	—	—	0.3	0.4	0.4	0.3	0.4	0.3	0.4	+0.1
10th Grade	—	—	—	—	0.8	0.9	1.1	1.0	1.1	1.1	0.7	-0.4ss	—	—	—	—	0.3	0.3	0.4	0.5	0.5	0.4	0.2	-0.2s
12th Grade	—	—	—	—	1.0	1.0	1.2	0.8	1.0	1.6	0.8	-0.8sss	—	—	—	—	0.6	0.4	0.6	0.4	0.4	0.7	0.3	-0.3s
College Students	—	—	—	—	0.0	0.8	0.4	0.9	0.3	0.8	0.6	-0.2	—	—	—	—	0.0	0.1	0.2	0.2	0.3	0.4	0.3	-0.1
Young Adults	—	—	—	—	0.3	0.4	0.4	0.7	0.6	0.5	0.9	+0.4	—	—	—	—	0.1	*	0.1	0.2	0.2	0.2	0.4	+0.3
Other Narcotics[j]																								
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	3.5	3.3	3.6	3.8	4.7	5.4	6.2	6.3	6.7	7.0	6.7	-0.2	1.1	1.2	1.3	1.5	1.8	2.0	2.3	2.4	2.6	2.9	3.0	0.0
College Students	2.7	2.7	2.5	2.4	3.8	3.1	4.2	4.2	4.3	4.5	5.7	+1.2	0.6	1.0	0.7	0.4	1.2	0.7	1.3	1.1	1.0	1.7	1.7	0.0
Young Adults	2.5	2.5	2.2	2.5	3.0	2.9	3.3	3.4	3.8	4.1	5.0	+0.9s	0.6	0.7	0.7	0.6	0.9	0.7	0.9	0.9	1.2	1.4	1.7	+0.3
Amphetamines[j]																								
8th Grade	6.2	6.5	7.2	7.9	8.7	9.1	8.1	7.2	6.9	6.5	6.7	+0.1	2.6	3.3	3.6	3.6	4.2	4.6	3.8	3.3	3.4	3.4	3.2	-0.3
10th Grade	8.2	8.2	9.6	10.2	11.9	12.4	12.1	10.7	10.4	11.1	11.7	+0.6	3.3	3.6	4.3	4.5	5.3	5.5	5.1	5.1	5.0	5.4	5.6	+0.2
12th Grade	8.2	7.1	8.4	9.4	9.3	9.5	10.2	10.1	10.2	10.5	10.9	+0.4	3.2	2.8	3.7	4.0	4.0	4.1	4.8	4.6	4.5	5.0	5.6	+0.6
College Students	3.9	3.6	4.2	4.2	5.4	4.2	5.7	5.1	5.8	6.6	7.2	+0.5	1.0	1.1	1.5	1.5	2.2	0.9	2.1	1.7	2.3	2.9	3.3	+0.4
Young Adults	4.3	4.1	4.0	4.5	4.6	4.2	4.6	4.5	4.7	5.4	5.8	+0.4	1.5	1.5	1.5	1.7	1.7	1.5	1.7	1.7	1.9	2.3	2.4	+0.1
Methamphetamine[k,l]																								
8th Grade	—	—	—	—	—	—	—	—	3.2	2.5	2.8	+0.2	—	—	—	—	—	—	—	—	1.1	0.8	1.3	+0.4s
10th Grade	—	—	—	—	—	—	—	—	4.6	4.0	3.7	-0.3	—	—	—	—	—	—	—	—	1.8	2.0	1.5	-0.5
12th Grade	—	—	—	—	—	—	—	—	4.7	4.3	3.9	-0.4	—	—	—	—	—	—	—	—	1.7	1.9	1.5	-0.4
College Students	—	—	—	—	—	—	—	—	3.3	1.6	2.4	+0.8	—	—	—	—	—	—	—	—	1.2	0.2	0.5	+0.3
Young Adults	—	—	—	—	—	—	—	—	2.8	2.5	2.8	+0.3	—	—	—	—	—	—	—	—	0.8	0.7	1.0	+0.3

(Table continued on next page)

TABLE 2-2 (cont.)
Trends in Annual and 30-Day Prevalence of Use of Various Drugs for Eighth, Tenth, and Twelfth Graders, College Students, and Young Adults (Ages 19-28)

	Annual												30-Day											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Ice[l]																								
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	1.4	1.3	1.7	1.8	2.4	2.8	2.3	3.0	1.9	2.2	2.5	+0.3	0.6	0.5	0.6	0.7	1.1	1.1	0.8	1.2	0.8	1.0	1.1	+0.1
College Students	0.1	0.2	0.7	0.8	1.1	0.3	0.8	1.0	0.5	0.5	0.6	+0.1	0.0	0.0	0.3	0.5	0.3	0.1	0.2	0.3	0.0	0.0	0.1	+0.1
Young Adults	0.3	0.4	0.8	0.9	1.2	0.9	0.9	1.1	0.9	1.2	1.1	-0.2	*	0.1	0.3	0.5	0.3	0.3	0.3	0.3	0.4	0.4	0.4	-0.1
Barbiturates[j]																								
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	3.4	2.8	3.4	4.1	4.7	4.9	5.1	5.5	5.8	6.2	5.7	-0.5	1.4	1.1	1.3	1.7	2.2	2.1	2.1	2.6	2.6	3.0	2.8	-0.2
College Students	1.2	1.4	1.5	1.2	2.0	2.3	3.0	2.5	3.2	3.7	3.8	+0.2	0.3	0.7	0.4	0.4	0.5	0.8	1.2	1.1	1.1	1.1	1.5	+0.4
Young Adults	1.8	1.6	1.9	1.8	2.1	2.2	2.4	2.5	2.8	3.4	3.7	+0.3	0.5	0.5	0.6	0.6	0.8	0.8	0.9	0.9	1.1	1.3	1.7	+0.3
Tranquilizers[b,j]																								
8th Grade	1.8	2.0	2.1	2.4	2.7	3.3	2.9	2.6	2.5	2.6	3.0	+0.4	0.8	0.8	0.9	1.1	1.2	1.5	1.2	1.2	1.1	1.4	1.6	+0.2
10th Grade	3.2	3.5	3.3	3.3	4.0	4.6	4.9	5.1	5.4	5.6	5.9	+0.3	1.2	1.5	1.1	1.5	1.7	1.7	2.2	2.2	2.2	2.5	2.9	+0.3
12th Grade	3.6	2.8	3.5	3.7	4.4	4.6	4.7	5.5	5.8	5.7	6.5	+0.8	1.4	1.0	1.2	1.4	1.8	2.0	1.8	2.4	2.5	2.6	3.0	+0.4
College Students	2.4	2.9	2.4	1.8	2.9	2.8	3.8	3.9	3.8	4.2	5.1	+0.9	0.6	0.6	0.4	0.4	0.5	0.7	1.2	1.3	1.1	2.0	1.5	-0.5
Young Adults	3.5	3.4	3.1	2.9	3.4	3.2	3.1	3.8	3.7	4.6	5.5	+0.9s	0.9	1.0	1.0	0.8	1.1	0.7	1.1	1.2	1.3	1.8	2.1	+0.3
Rohypnol[e,m]																								
8th Grade	—	—	—	—	—	1.0	0.8	0.8	0.5	0.5	0.7	+0.2	—	—	—	—	—	0.5	0.3	0.4	0.3	0.3	0.4	+0.1
10th Grade	—	—	—	—	—	1.1	1.3	1.2	1.0	0.8	1.0	+0.2	—	—	—	—	—	0.5	0.5	0.4	0.5	0.4	0.2	-0.2
12th Grade	—	—	—	—	—	1.1	1.2	1.4	1.0	0.8	0.9	+0.2	—	—	—	—	—	0.5	0.3	0.3	0.3	0.4	0.3	-0.1
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
GHB[k,p]																								
8th Grade	—	—	—	—	—	—	—	—	—	1.2	1.1	-0.1	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	1.1	1.0	-0.2	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	—	—	—	—	—	—	—	—	—	1.9	1.6	-0.2	—	—	—	—	—	—	—	—	—	—	—	—
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ketamine[k,p]																								
8th Grade	—	—	—	—	—	—	—	—	—	1.6	1.3	-0.3	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	2.1	2.1	0.0	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	—	—	—	—	—	—	—	—	—	2.5	2.5	0.0	—	—	—	—	—	—	—	—	—	—	—	—
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Alcohol,[n] any use																								
8th Grade	54.0	53.7	51.6	—	—	—	—	—	—	—	—	—	25.1	26.1	26.2	—	—	—	—	—	—	—	—	—
			45.4	46.8	45.3	46.5	45.5	43.7	43.5	43.1	41.9	-1.2			24.3	25.5	24.6	26.2	24.5	23.0	24.0	22.4	21.5	-0.9
10th Grade	72.3	70.2	69.3	—	—	—	—	—	—	—	—	—	42.8	39.9	41.5	—	—	—	—	—	—	—	—	—
			63.4	63.9	63.5	65.0	65.2	62.7	63.7	65.3	63.5	-1.8			38.2	39.2	38.8	40.4	40.1	38.8	40.0	41.0	39.0	-2.0
12th Grade	77.7	76.8	76.0	—	—	—	—	—	—	—	—	—	54.0	51.3	51.0	—	—	—	—	—	—	—	—	—
			72.7	73.0	73.7	72.5	74.8	74.3	73.8	73.2	73.3	+0.1			48.6	50.1	51.3	50.8	52.7	52.0	51.0	50.0	49.8	-0.3
College Students	88.3	86.9	85.1	82.7	83.2	82.9	82.4	84.6	83.6	83.2	83.0	-0.2	74.7	71.4	70.1	67.8	67.5	67.0	65.8	68.1	69.6	67.4	67.0	-0.4
Young Adults	86.9	86.2	85.3	83.7	84.7	84.0	84.3	84.0	84.1	84.0	84.3	+0.3	70.6	69.0	68.3	67.7	68.1	66.7	67.5	66.9	68.2	66.8	67.2	+0.4

(Table continued on next page)

TABLE 2-2 (cont.)
Trends in Annual and 30-Day Prevalence of Use of Various Drugs for Eighth, Tenth, and Twelfth Graders, College Students, and Young Adults (Ages 19-28)

	Annual												30-Day											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Been Drunk[l]																								
8th Grade	17.5	18.3	18.2	18.2	18.4	19.8	18.4	17.9	18.5	18.5	16.6	-1.9s	7.6	7.5	7.8	8.7	8.3	9.6	8.2	8.4	9.4	8.3	7.7	-0.7
10th Grade	40.1	37.0	37.8	38.0	38.5	40.1	40.7	38.3	40.9	41.6	39.9	-1.7	20.5	18.1	19.8	20.3	20.8	21.3	22.4	21.1	22.5	23.5	21.9	-1.6
12th Grade	52.7	50.3	49.6	51.7	52.5	51.9	53.2	52.0	53.2	51.8	53.2	+1.4	31.6	29.9	28.9	30.8	33.2	31.3	34.2	32.9	32.9	32.3	32.7	+0.4
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cigarettes																								
Any use																								
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	14.3	15.5	16.7	18.6	19.1	21.0	19.4	19.1	17.5	14.6	12.2	-2.5sss
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	20.8	21.5	24.7	25.4	27.9	30.4	29.8	27.6	25.7	23.9	21.3	-2.6ss
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	28.3	27.8	29.9	31.2	33.5	34.0	36.5	35.1	34.6	31.4	29.5	-2.0
College Students	35.6	37.3	38.8	37.6	39.3	41.4	43.6	44.3	44.5	41.3	39.0	-2.3	23.2	23.5	24.5	23.5	26.8	27.9	28.3	30.0	30.6	28.2	25.7	-2.4
Young Adults	37.7	37.9	37.8	38.3	38.8	40.3	41.8	41.6	41.1	40.9	41.1	+0.2	28.2	28.3	28.0	28.0	29.2	30.1	29.9	30.9	30.3	30.1	30.2	+0.1
Bidis[k,l]																								
8th Grade	—	—	—	—	—	—	—	—	—	3.9	2.7	-1.3s	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	6.4	4.9	-1.5s	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	—	—	—	—	—	—	—	—	—	9.2	7.0	-2.2s	—	—	—	—	—	—	—	—	—	—	—	—
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Kreteks[k,l]																								
8th Grade	—	—	—	—	—	—	—	—	—	—	2.6	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	6.0	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	—	—	—	—	—	—	—	—	—	—	10.1	—	—	—	—	—	—	—	—	—	—	—	—	—
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Smokeless Tobacco[illegible]																								
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	6.9	7.0	6.6	7.7	7.1	7.1	5.5	4.8	4.5	4.2	4.0	-0.2
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	10.0	9.6	10.4	10.5	9.7	8.6	8.9	7.5	6.5	6.1	6.9	+0.8
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	11.4	10.7	11.1	12.2	9.8	9.7	8.8	8.4	7.6	7.8	+0.2
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Steroids[l]																								
8th Grade	1.0	1.1	0.9	1.2	1.0	0.9	1.0	1.2	1.7	1.7	1.6	0.0	0.4	0.5	0.5	0.5	0.6	0.4	0.5	0.5	0.7	0.8	0.7	-0.1
10th Grade	1.1	1.1	1.0	1.1	1.2	1.2	1.2	1.2	1.7	2.2	2.1	-0.1	0.6	0.6	0.5	0.6	0.6	0.5	0.7	0.6	0.9	1.0	0.9	0.0
12th Grade	1.4	1.1	1.2	1.3	1.5	1.4	1.4	1.7	1.8	1.7	2.4	+0.7s	0.8	0.6	0.7	0.9	0.7	0.7	1.0	1.1	0.9	0.8	1.3	+0.5s
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	0.5	0.4	0.3	0.4	0.5	0.3	0.5	0.4	0.6	0.4	0.4	0.0	0.2	0.1	0.0	0.1	0.2	0.2	0.2	0.2	0.3	0.1	0.1	0.0

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001.
'—' indicates data not available. '*' indicates less than .05 percent but greater than 0 percent.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table 2-1 for relevant footnotes.

SOURCE: The Monitoring the Future Study, the University of Michigan.

TABLE 2-3

Trends in 30-Day Prevalence of Daily Use of Various Drugs for Eighth, Tenth, and Twelfth Graders, College Students, and Young Adults (Ages 19-28)

	Daily											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Marijuana/Hashish, daily[q]												
8th Grade	0.2	0.2	0.4	0.7	0.8	1.5	1.1	1.1	1.4	1.3	1.3	0.0
10th Grade	0.8	0.8	1.0	2.2	2.8	3.5	3.7	3.6	3.8	3.8	4.5	+0.7s
12th Grade	2.0	1.9	2.4	3.6	4.6	4.9	5.8	5.6	6.0	6.0	5.8	-0.2
College Students	1.8	1.6	1.9	1.8	3.7	2.8	3.7	4.0	4.0	4.6	4.5	0.0
Young Adults	2.3	2.3	2.4	2.8	3.3	3.3	3.8	3.7	4.4	4.2	5.0	+0.8s
Alcohol[n,q]												
Any daily use												
8th Grade	0.5	0.6	0.8	—	—	—	—	—	—	—	—	—
			1.0	1.0	0.7	1.0	0.8	0.9	1.0	0.8	0.9	+0.1
10th Grade	1.3	1.2	1.6	—	—	—	—	—	—	—	—	—
			1.8	1.7	1.7	1.6	1.7	1.9	1.9	1.8	1.9	+0.1
12th Grade	3.6	3.4	2.5	—	—	—	—	—	—	—	—	—
			3.4	2.9	3.5	3.7	3.9	3.9	3.4	2.9	3.6	+0.7ss
College Students	4.1	3.7	3.9	3.7	3.0	3.2	4.5	3.9	4.5	3.6	4.7	+1.0
Young Adults	4.9	4.5	4.5	3.9	3.9	4.0	4.6	4.0	4.8	4.1	4.4	+0.3
Been Drunk, daily[l,q]												
8th Grade	0.1	0.1	0.2	0.3	0.2	0.2	0.2	0.3	0.4	0.3	0.2	0.0
10th Grade	0.2	0.3	0.4	0.4	0.6	0.4	0.6	0.6	0.7	0.5	0.6	+0.1
12th Grade	0.9	0.8	0.9	1.2	1.3	1.6	2.0	1.5	1.9	1.7	1.4	-0.3
College Students	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—
5+ drinks in a row in last 2 weeks												
8th Grade	12.9	13.4	13.5	14.5	14.5	15.6	14.5	13.7	15.2	14.1	13.2	-0.9
10th Grade	22.9	21.1	23.0	23.6	24.0	24.8	25.1	24.3	25.6	26.2	24.9	-1.3
12th Grade	29.8	27.9	27.5	28.2	29.8	30.2	31.3	31.5	30.8	30.0	29.7	-0.3
College Students	42.8	41.4	40.2	40.2	38.6	38.3	40.7	38.9	40.0	39.3	40.9	+1.6
Young Adults	34.7	34.2	34.4	33.7	32.6	33.6	34.4	34.1	35.8	34.7	35.9	+1.2
Cigarettes												
Any daily use												
8th Grade	7.2	7.0	8.3	8.8	9.3	10.4	9.0	8.8	8.1	7.4	5.5	-1.9sss
10th Grade	12.6	12.3	14.2	14.6	16.3	18.3	18.0	15.8	15.9	14.0	12.2	-1.8s
12th Grade	18.5	17.2	19.0	19.4	21.6	22.2	24.6	22.4	23.1	20.6	19.0	-1.6
College Students	13.8	14.1	15.2	13.2	15.8	15.9	15.2	18.0	19.3	17.8	15.0	-2.8s
Young Adults	21.7	20.9	20.8	20.7	21.2	21.8	20.6	21.9	21.5	21.8	21.2	-0.6
1/2 pack+/day												
8th Grade	3.1	2.9	3.5	3.6	3.4	4.3	3.5	3.6	3.3	2.8	2.3	-0.4
10th Grade	6.5	6.0	7.0	7.6	8.3	9.4	8.6	7.9	7.6	6.2	5.5	-0.6
12th Grade	10.7	10.0	10.9	11.2	12.4	13.0	14.3	12.6	13.2	11.3	10.3	-1.0
College Students	8.0	8.9	8.9	8.0	10.2	8.4	9.1	11.3	11.0	10.1	7.8	-2.4s
Young Adults	16.0	15.7	15.5	15.3	15.7	15.3	14.6	15.6	15.1	15.1	14.6	-0.4
Smokeless Tobacco,												
8th Grade	1.6	1.8	1.5	1.9	1.2	1.5	1.0	1.0	0.9	0.9	1.2	+0.3
10th Grade	3.3	3.0	3.3	3.0	2.7	2.2	2.2	2.2	1.5	1.9	2.2	+0.4
12th Grade	—	4.3	3.3	3.9	3.6	3.3	4.4	3.2	2.9	3.2	2.8	-0.4
College Students	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—

NOTES: Level of significance of difference between the two most recent classes:
s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table 2-1 for relevant footnotes.

SOURCE: The Monitoring the Future Study, the University of Michigan.

BEST COPY AVAILABLE

Chapter 3

STUDY DESIGN AND PROCEDURES

Monitoring the Future has a complex cohort-sequential design appropriate for distinguishing and explaining three types of change: period-related, age-related, and cohort-related. This chapter contains a description of this research design, including the sampling plans and field procedures used in both the in-school surveys of the eighth-, tenth-, and twelfth-grade students and the follow-up surveys of younger and middle-aged adults. Related methodological issues such as response rates, population coverage, and the validity of the measures are also discussed. We begin with a description of the design that has been used consistently over twenty-seven years to survey high school seniors; then we describe the more recently instituted design for eighth and tenth graders. Finally, the designs for the *follow-up* surveys of former twelfth graders, and former eighth and tenth graders, are covered.[8,9]

RESEARCH DESIGN AND PROCEDURES FOR THE SURVEYS OF SENIORS

The data from high school seniors have been collected during the spring of each year starting with the class of 1975. Each year's data collection takes place in between 123 to 146 public and private high schools selected to provide an accurate representative cross section of high school seniors throughout the coterminous United States (see Figure 3-1).

The Population Under Study

The senior year of high school was chosen as an optimal point for monitoring the drug use and related attitudes of youth for several reasons. First, completion of high school represents the end of an important developmental stage in this society because it demarcates both the end of universal education and, for many, the end of living in the parental home. Therefore, it is a logical point at which to take stock of the cumulated influences of these two environments on American youth. Further, completion of high school represents the jumping-off point from which young people diverge into widely differing social environments and experiences. Senior year, then, represents a good time to take a "before" measure that allows calculation of changes that may be attributable to the many environmental and role transitions that occur in young adulthood. Finally, there were some important practical advantages to building the original system of data

---

[8] For a more detailed description of the study design, see Bachman, J. G., Johnston, L. D., & O'Malley, P. M. (2001). *The Monitoring the Future project after twenty-seven years: Design and procedures.* (Monitoring the Future Occasional Paper No. 54.) Ann Arbor, MI: Institute for Social Research.

[9] For a more detailed description of the full range of research objectives of Monitoring the Future, see Johnston, L. D., O'Malley, P. M., Schulenberg, J., & Bachman, J. G. (2001). *The aims and objectives of the Monitoring the Future study and progress toward fulfilling them as of 2001.* (Monitoring the Future Occasional Paper No. 52.) Ann Arbor, MI: Institute for Social Research.

collections around samples of high school seniors. The need for systematically repeated, large-scale samples from which to make reliable estimates of change requires that considerable stress be laid on cost efficiency as well as feasibility. The last year of high school constitutes the final point at which a reasonably good national sample of an age-specific cohort can be drawn and studied economically.

The Omission of Dropouts

One limitation in the study design is the exclusion of those young men and women who drop out of high school before graduation—between 15 and 20 percent of each age cohort nationally, according to U.S. Census statistics. Clearly, the omission of high school dropouts introduces biases in the estimation of certain characteristics of the entire age group; however, for most purposes, the small proportion of dropouts sets outer limits on the bias. Further, since the bias from missing dropouts should remain just about constant from year to year, their omission should introduce little or no bias in *change* estimates. Indeed, we believe the changes observed over time for those who finish high school are likely to parallel the changes for dropouts in most instances. Appendix A to Volume I addresses the likely effects of the exclusion of dropouts on estimates of prevalence of drug use and trends in drug use among the entire age cohort; the reader is referred there for a more detailed discussion of this issue.

Sampling Procedures

A multi-stage random sampling procedure is used to secure the nationwide sample of high school seniors each year. Stage 1 is the selection of particular geographic areas, Stage 2 is the selection (with probability proportionate to size) of one or more high schools in each area, and Stage 3 is the selection of seniors within each high school. Within each school, up to about 350 seniors may be included. In schools with fewer seniors, the usual procedure is to include all of them in the data collection, though a smaller sample is sometimes taken to accommodate the needs of the school. When a subset of seniors is to be selected, it is done either by randomly sampling entire classrooms or by some other unbiased, random method. Weights are assigned to compensate for differential probabilities of selection at each stage. Final weights are normalized to average 1.0 (so that the weighted number of cases equals the unweighted number of cases overall). This three-stage sampling procedure has yielded the numbers of participating schools and students over the years shown in Table 3-1.

Questionnaire Administration

About ten days before the questionnaire administration date, the target respondents are given flyers explaining the study. Local Institute for Social Research representatives and their assistants conduct the actual questionnaire administrations following standardized procedures that are detailed in a project instruction manual. The questionnaires are administered in classrooms during a normal class period whenever possible; however, circumstances in some schools require the use of larger group administrations.

Questionnaire Format

Because many questions are needed to cover all of the topic areas in the study, much of the questionnaire content intended for high school seniors is divided into six different questionnaire forms distributed to participants in an ordered sequence that ensures six virtually identical random sub-samples. (Five questionnaire forms were used between 1975 and 1988.) About one-third of each questionnaire form consists of key, or "core," variables common to all forms. All demographic variables, and nearly all of the drug *use* variables included in this report, are contained in this core set of measures. Many of the questions dealing with attitudes, beliefs, and perceptions of relevant features of the social environment are in a single form only, and the data are thus based on one-fifth as many cases in 1975-1988 (approximately 3,300) and on one-sixth as many cases in 1989-2001 (approximately 2,600). All tables in this report list the sample sizes upon which the statistics are based, stated in terms of the weighted number of cases (which is roughly equivalent to the actual number of cases).

RESEARCH DESIGN AND PROCEDURES FOR THE SURVEYS OF LOWER GRADES

Beginning in 1991, there was an important expansion of the study to include nationally representative samples of eighth- and tenth-grade students. Surveys at these two grade levels have been conducted on an annual basis since 1991.

In general, the procedures used for the annual in-school surveys of eighth- and tenth-grade students closely parallel those used for high school seniors, including the procedures for selecting schools and students, questionnaire administration, and questionnaire formats. A major exception is that only two different questionnaire forms were used from 1991 to 1996, expanding to four forms beginning in 1997 rather than the six used with seniors. Eighth and tenth grades both receive the same questionnaire forms and, for the most part, the questionnaire content is drawn from the twelfth-grade questionnaires. Thus, key demographic variables and measures of drug use and related attitudes and beliefs are generally identical for all three grades. The forms used in both eighth and tenth grades have a common core (Parts B and C) that parallels the core used in twelfth-grade forms. Many fewer questions about lifestyles and values are included in the eighth- and tenth-grade forms, in part because we think that many of these attitudes are likely to be more fully formed by twelfth grade and, therefore, are best monitored there. For the national survey of eighth graders each year, approximately 155 schools (mostly junior high schools and middle schools) are sampled, and approximately 17,000 to 19,000 students are surveyed. For the tenth graders, approximately 130 high schools are sampled, and from 14,000 to 17,000 students are surveyed. (See Table 3-1 for specifics.)

The research design originally called for follow-up surveys of subsamples of the eighth and tenth graders participating in the study, carried out at two-year intervals, similar to the twelfth-grade follow-up samples. From 1991 to 1994, this plan influenced the design of the cross-sectional studies of eighth and tenth graders in an important way. In order to "recapture" many of the eighth-grade participants two years later in the normal tenth-grade cross-sectional study for that year, we selected the eighth-grade schools by drawing a sample of high schools and then selecting a sample of their "feeder schools" that contained eighth graders. This extra stage in the sampling process meant that many of the eighth-grade participants in, say, the 1991 cross-sectional survey were also participants in the 1993 cross-sectional survey of tenth graders. Thus, a fair amount of panel data was generated at no additional cost. However, having followed this design from 1991 through 1993, we concluded that the saving in follow-up costs did not justify the complexities in sampling, administration, and interpretation. Therefore, since 1994, we have used a simplified design in which eighth-grade schools were drawn independently of the tenth-grade school sample. Further follow-ups (at two-year intervals) were conducted only on panels of students drawn from the first three cohorts of students surveyed in the eighth and tenth grades, that is, those surveyed in school in 1991, 1992, and 1993.

When follow-up surveys of new cohorts of eighth and tenth graders were no longer being conducted, the collection of personal identification information for follow-up purposes was no longer a necessity. For confidentiality reasons, this personal information had been gathered on a tear-off sheet at the back of each questionnaire. We felt that there were potential advantages in moving toward a fully anonymous procedure for these grade levels, including the following: (a) school cooperation might be easier to obtain; (b) any suppression effect that the confidential mode of administration might have could be both eliminated and quantified; and (c) if there *were* any mode of administration effect, it would be removed from the national data, which are widely used for comparison purposes in state and local surveys (nearly all of which use anonymous questionnaires), and thus make those comparisons more valid. Therefore, in 1998 for the first time, in half of the eighth- and tenth-grade schools surveyed, the questionnaires administered were made fully anonymous. Specifically, the half-sample of schools beginning their two-year participation in Monitoring the Future in 1998 received the anonymous questionnaires, while the half-sample participating in the study for their second and final year continued to get the confidential questionnaires.

A careful examination of the 1998 results, based on the two equivalent half-samples at grade 8, and also at grade 10, revealed that there was no effect of this methodological change among tenth graders, and, at most, only a very modest effect in the self-reported substance use rates among eighth graders (with prevalence rates slightly higher in the anonymous condition). The net effect of this methodological change is a possible increase in the observed eighth-grade prevalence estimates for marijuana, alcohol, and cigarettes in 1998 from what they would have been had there been no change in questionnaire administration. For those three drugs, that means that the declines in use in 1998 may be slightly understated for the eighth graders only. In other words, the direction of the change is the same as that shown in the tables, but the actual declines may be slightly larger than those shown. For example, the annual prevalence of marijuana use among eighth graders is shown to have fallen by 0.8 percentage points between 1997 and 1998; however, the half-sample of eighth-grade schools receiving exactly the same type of questionnaire that was used in 1997 showed a slightly greater decline of 1.5 percentage points.

For cigarettes, this change in method appeared to have no effect on self-reported rates of daily use or half-pack per day use, and to have had only a very small effect on 30-day prevalence. Thus, for example, the 30-day prevalence of cigarette use among all of the eighth graders surveyed is shown to have fallen 0.3 percentage points between 1997 and 1998; while the half-sample of eighth-grade schools receiving exactly the same type of questionnaire as was used in 1997 showed a slightly greater decline of 0.6 percentage points. Finally, lifetime cigarette prevalence is shown as falling by 1.6 percentage points between 1997 and 1998, but in the half-sample of schools with a constant methodology, it fell by 2.6 percentage points.

We have examined the effects of mode of administration in detail in a published journal article, in which we use multivariate controls to assess the effects of the change on the eighth-grade self-report data. It generally shows even less effect than is to be found without such controls.[10]

All tables and figures in Volume I use data from both half-samples of eighth graders, combined. This is also true for the tenth graders (for whom we found no methodological effect) and the twelfth graders (for whom it is assumed there is no such effect since none was found among the tenth graders). In 1999 the remaining half of the participating schools (all beginning the first of their two years of participation) received anonymous questionnaires, as well. Thus, from 1999 on, all data from eighth- and tenth-grade students are gathered using anonymous questionnaires. We continue to use confidential questionnaires with twelfth graders in order to permit follow-up of those who are randomly selected into the panel studies.

RESEARCH DESIGN AND PROCEDURES FOR THE FOLLOW-UP SURVEYS OF SENIORS

Beginning with the graduating class of 1976, each senior class has been followed up annually on a continuing basis after high school for seven follow-up data collections, which corresponds to their reaching a modal age of 32.[11] From the roughly 15,000 to 17,000 seniors originally participating in a given senior class, a representative sample of 2,400 individuals is chosen for follow-up. In order to ensure sufficient numbers of drug users in the follow-up surveys, seniors reporting 20 or more occasions of using marijuana in the previous 30 days, or any use of any of the other illicit drugs in the previous 30 days, are selected with higher probability (by a factor of 3.0) than the remaining seniors. Differential weighting is then used in all follow-up analyses to compensate for these differential sampling probabilities. Because those in the drug-using stratum receive a weight of only 0.33 in the calculation of all statistics to correct for their over-representation at the selection stage, there are actually more follow-up respondents than are reported in the weighted Ns given in the tables.

The 2,400 selected respondents from each class are randomly split into two matching groups of 1,200 each—one group to be surveyed on even-numbered calendar years, and the other group to be surveyed on odd-numbered years. This two-year cycle is intended to reduce the burden on individual respondents, thus yielding a better retention rate across the years. By alternating the two half-samples, we have data from a given graduating class every year, even though any given respondent participates only every other year.

---

[10] O'Malley, P. M., Johnston, L. D., Bachman, J. G., & Schulenberg, J. (2000). A comparison of confidential versus anonymous survey procedures: Effects on reporting of drug use and related attitudes and beliefs in a national study of students. *Journal of Drug Issues, 30,* 35-54.

[11] Further follow-ups occur (or will occur) at half-decade intervals, beginning with age 35.

Follow-Up Procedures

Using information provided by high school senior respondents on a tear-off card (containing the respondent's name, address, phone number, and the name and address of someone who would always know how to reach them), mail contact is maintained with the subset of people selected for inclusion in the follow-up panels. Newsletters are sent to them each year, and name and address corrections are requested. Questionnaires are sent to each individual biennially in the spring of each year by certified mail. A check for $10.00, made payable to the respondent, is attached to the front of each questionnaire.[12] Reminder letters and postcards are sent at fixed intervals thereafter; finally, those who have not responded receive a prompting phone call from the Survey Research Center's phone interviewing facility in Ann Arbor. If requested, a second copy of the questionnaire is sent; but no questionnaire content is administered by phone. If a respondent asks not to be bothered further, that wish is honored.

Panel Retention Rates

To date, an average of approximately 70% of those selected for inclusion in follow-up panels have returned questionnaires in the first follow-up after high school, though that number has fallen to an average return of 65% over the most recent five years. The retention rate in a given cohort declines across time, as would be expected. The 2001 panel retention from the class of 1987—the oldest of the panels in the seven biennial follow-ups, now age 32 (14 years past their first data collection in high school)—was 51%. For the longer-term panels, the 2001 retention rate for 35-year-olds was 50% and for 40-year-olds, 59%.

Corrections for Panel Attrition

Because, to a modest degree, attrition is associated with drug use, we have introduced corrections into the prevalence of use estimates for the follow-up panels. These corrections raise the prevalence estimates above the uncorrected ones, but only slightly. We believe the resulting estimates to be the most accurate obtainable for the population of high school senior graduates but still low for the age group as a whole, due to the omission of dropouts and absentees from the population covered by the original panels.[13]

---

[12] Note that, for the class of 1991 and all prior classes, the follow-up checks were for $5.00. The rate was raised, beginning with the class of 1992, to compensate for the effects of inflation over the life of the study. An experiment was first conducted that suggested that the increased payment was justified based on the increased panel retention it achieved.

[13] The intent of the weighting process is to correct for the effects of differential attrition on follow-up drug use estimates. Different weights are used for different substances. Cigarettes, alcohol, and marijuana each have one weight for every follow-up of each graduating class. The weights are based on the observed differences in the distribution on an index of twelfth-grade use of the relevant substance for the follow-up sample compared to the distribution based on the full base-year sample. For example, the distribution on the index of marijuana use in the 1988 follow-up of approximately 1,000 respondents from the class of 1976 was compared to the original 1976 base-year distribution for the entire participating base-year class of 17,000 respondents; and weights were derived that, when applied to the base-year data for only those participating in the 1988 follow-up, would reproduce the original base-year frequency distribution of marijuana use. A similar procedure is used to determine a weight for all illicit drugs other than marijuana combined. In this case, however, an average weight is derived across graduating classes. Thus, the same weight is applied, for example, to all respondents in the follow-up of 1988, regardless of when they graduated from high school.

Follow-Up Questionnaire Format

The questionnaires used in the follow-up surveys are very much like those used in the senior year. They are optically scanned; they contain a core section on drug use and background and demographic factors common to all forms; and they have questions about a wide range of topics at the beginning and ending sections, many of which are unique to each questionnaire form. Many of the questions asked of seniors are retained in the follow-up questionnaires, and respondents are consistently mailed the same version (or form) of the questionnaire that they first received in senior year, so that changes over time in their behaviors, attitudes, experiences, and so forth can be measured. Questions specific to high school status and experiences are dropped in the follow-up, of course, and questions relevant to post-high school status and experiences are added. Thus, there are questions about college, military service, civilian employment, marriage, parenthood, and so on.

For the early follow-up cohorts, the numbers of cases on single-form questions were one-fifth the size of the total follow-up sample because five different questionnaire forms were used. Beginning with the Class of 1989, a sixth form was introduced in senior year. That new questionnaire form was first sent to follow-up respondents in 1990; single-form data since then have Ns one-sixth the total follow-up sample size. In the follow-up studies, single-form samples from a single cohort are too small to make reliable estimates; therefore, in most cases where they are reported, the data from several adjacent cohorts are combined or concatenated.

REPRESENTATIVENESS AND SAMPLE ACCURACY

School Participation

Schools are invited to participate in the study for a two-year period. For each school that declines to participate, a similar school (in terms of size, geographic area, urbanicity, etc.) is recruited as a replacement for that "slot." In 2001, either an original school or a replacement school was obtained in 98% of the sample units, or "slots." With very few exceptions, each school participating in the first year has agreed to participate in the second year as well. Figure 3-2 provides the year-specific school participation rates and the percentage of "slots" filled since 1977. (The data for the years prior to 1991 are for twelfth grade only; beginning in 1991, the data are for eighth, tenth, and twelfth grades combined.) As shown in the table, replacements for declining schools are obtained in the vast majority of cases.

There are two questions that are sometimes raised with respect to school participation rates: (1) Are participation rates so low as to compromise the representativeness of the sample? (2) Does variation in participation rates over time contribute to changes in estimates of drug use?

With respect to the first issue, the selection of replacement schools (which occurs in practically all instances of an original school refusal) almost entirely removes problems of bias in region, urbanicity, and the like, that might result from certain schools refusing to participate. Other potential biases could be more subtle, however. If, for example, it turned out that most schools with "drug problems" refused to participate, the sample would be seriously biased. And if any other single factor were dominant in most refusals, that reason for refusal also might suggest a source of serious bias. In fact, however, the reasons given for a school refusing to participate tend to be varied and are often a function of happenstance events specific to that particular year; only a very small proportion specifically object to the drug-related or "sensitive" nature of the content of the survey.

If it were the case that schools differed substantially in drug use, then which particular schools participated could have a greater effect on estimates of drug use. However, the great majority of variance in drug use lies within schools, not between schools. For example, for tenth graders in 1992, between-schools variance for marijuana use was 4%-6% of the total variance (depending on the specific measure); for inhalant use, 1%-2%; for LSD, 2%-4%; for crack cocaine, 1.0%-1.5%; for alcohol use, 4%-5%; and for cigarette use, 3%-4%. (Eighth- and twelfth-grade values are similar.) To the extent that schools tend to be fairly similar in drug use, then which particular schools participate (within a selection framework that seeks national representation) has a smaller effect on estimates of drug use. The fact that the overwhelming majority of variance in drug use lies within schools implies that, at least with respect to drug use, schools are for the most part fairly similar.[14] Further, some, if not most, of the between-schools variance is due to differences related to region, urbanicity, etc.—factors that remain well controlled in the present sampling design because of the way in which replacement schools are selected.

With respect to the second issue, the observed data from the series make it extremely unlikely that results have been significantly affected by changes in response rate. If changes in response rates seriously affected prevalence estimates, there would be noticeable bumps up or down in concert with the changing rates. But in fact the trend figures that result from this series of surveys are very smooth and change in a very orderly fashion from one year to the next. This suggests very strongly that the level of school-related error in the estimates does not vary much over time. Moreover, the fact that different substances trend in very different ways further refutes any likelihood that changes in response rates are affecting prevalence estimates. We have observed, for example, marijuana use decreasing while cocaine use was stable (in the early 1980s); alcohol use declining while cigarette use was stable (in the mid- to late 1980s); marijuana use increasing while inhalant use was decreasing (from 1994 to 1997). All of these patterns are explainable in terms of psychological, social, and cultural factors (as described in this and previous volumes in this series), and cannot be explained by changes in response rates.

Of course, there could be some sort of a constant bias across the years, but even in the unlikely event that there was, it seems highly improbable that it would be of much consequence for policy purposes, given that it would not affect trends and likely would have a very modest effect on prevalence rates. Thus we have a high degree of confidence that school refusal rates have not seriously biased the survey results.

---

[14] Among the schools that actually participated in the study, there is very little difference in substance use rates between the schools that were original selections, taken as a set, and the schools that were replacement schools. Averaged over the years 1991 through 2000, for grades 8, 10, and 12 combined, the difference between original schools and replacement schools averaged 0.03% in the observed prevalence rates averaged across two indexes of annual illicit drug use, the annual prevalence of each of the major illicit drug classes, and several measures of alcohol and cigarette use. For the individual drugs and drug indexes, the differences between the original and replacement schools, averaged across grades and years, fell within ±0.9%.

At each grade level, schools are selected in such a way that half of each year's sample is comprised of schools that participated the previous year, and half is comprised of schools that will participate the next year. (Both of these samples are national replicates, meaning that each is drawn to be nationally representative by itself.) This staggered half-sample design is used to check on possible errors in the year-to-year trend estimates due to school turnover. For example, separate sets of one-year trend estimates are computed based on students in the half-sample of schools that participated in both 1999 *and* 2000, then based on the students in the half-sample that participated in both 2000 *and* 2001, and so on. Thus, each one-year *matched half-sample* trend estimate derived in this way is based on a constant set of schools (about 65 in 12th grade, for example). When the trend data derived from the matched half-sample (examined separately for each class of drugs) are compared with trends based on the total sample of schools, the results are usually highly similar, indicating that the trend estimates are little affected by turnover or shifting refusal rates in the school samples. As would be expected, the *absolute* prevalence of use estimates for a given year are not as accurate using just the half-sample because the sample size is only half as large.

Student Participation

In 2001, completed questionnaires were obtained from 90% of all sampled students in eighth grade, 88% in tenth grade, and 82% in twelfth grade. (See Table 3-1 for response rates in earlier years.) The single most important reason that students are missed is absence from class at the time of data collection; in most cases, for reasons of cost efficiency, we do not schedule special follow-up data collections for absent students. Students with fairly high rates of absenteeism also report above-average rates of drug use; therefore, some degree of bias is introduced into the prevalence estimates by missing the absentees. Much of that bias could be corrected through the use of special weighting based on the reported absentee rates of the students who *did* respond; however, we decided not to use such a weighting procedure because the bias in overall drug use estimates was determined to be quite small *and* because the necessary weighting procedures would have introduced greater sampling variance in the estimates. Appendix A in an earlier report[15] provides a discussion of this point, and Appendix A in this Volume illustrates the changes in trend and prevalence estimates that would result if corrections for absentees had been included. Of course, some students are not absent from class but simply refuse, when asked, to complete a questionnaire. However, the proportion of explicit refusals amounts to less than 1.5% of the target sample for each grade.

Sampling Accuracy of the Estimates

Confidence intervals (95%) are provided in Tables 4-1a through 4-1d for lifetime, annual, 30-day, and daily prevalence of use for eighth-, tenth-, and twelfth-grade students. As can be seen in Table 4-1a, confidence intervals for lifetime prevalence for seniors average less than ±1.5% across a variety of drug classes. That is, if we took a large number of samples of this size from the universe of all schools containing twelfth graders in the coterminous United States, 95 times out of 100 the sample would yield a result that would be less than 1.5 percentage points divergent from the result we would get from a comparable massive survey of *all* seniors in *all* schools. This is a high level of sampling accuracy, and it should permit detection of fairly small changes from one year to the next. Confidence intervals for the other prevalence periods (past 12 months, past 30 days, and current daily use) are generally smaller than those for lifetime use. In general, confidence intervals for eighth and tenth graders are very similar to those observed for twelfth graders. Some drugs are measured on only one or two forms (smokeless tobacco, PCP, nitrites, and others, as indicated in Table 2-1 footnotes); these drugs will have somewhat larger confidence intervals due to their smaller sample sizes. Appendix C contains information for the interested reader on how to calculate confidence intervals around other point estimates; it also provides the information needed to compare trends across time or to test the significance of differences between subgroups in any given year.

---

[15] Johnston, L. D., O'Malley, P. M., & Bachman, J. G. (1984). *Drugs and American high school students: 1975-1983.* DHHS (ADM) 85-1374. Washington, D.C.: U.S. Government Printing Office.

VALIDITY OF THE MEASURES OF SELF-REPORTED DRUG USE

Are sensitive behaviors such as drug use honestly reported? Like most studies dealing with sensitive behaviors, we have no direct, totally objective validation of the present measures; however, the considerable amount of existing inferential evidence strongly suggests that the self-report questions used in MTF produce largely valid data. A more complete discussion of the contributing evidence that leads to this conclusion may be found in other publications; here we will only briefly summarize the evidence.[16]

First, using a three-wave panel design, we established that the various measures of self-reported drug use have a high degree of reliability—a necessary condition for validity.[17] In essence, respondents were highly consistent in their self-reported behaviors over a three- to four-year time interval. Second, we found a high degree of consistency among logically related measures of use within the same questionnaire administration. Third, the proportion of seniors reporting some illicit drug use by senior year has reached two-thirds of all respondents in peak years and over 80% in some follow-up years, constituting *prima facie* evidence that the degree of underreporting must be very limited. Fourth, the seniors' reports of use by their unnamed friends—about whom they would presumably have less reason to distort reports of use—has been highly consistent with self-reported use in the aggregate in terms of both prevalence *and* trends in prevalence, as will be discussed later in this report. Fifth, we have found self-reported drug use to relate in consistent and expected ways to a number of other attitudes, behaviors, beliefs, and social situations—in other words, there is strong evidence of "construct validity." Sixth, the missing data rates for the self-reported use questions are only very slightly higher than for the preceding nonsensitive questions, in spite of explicit instructions to respondents immediately preceding the drug section to leave blank those drug use questions they felt they could not answer honestly. Seventh, an examination of consistency in reporting of lifetime use conducted on the long-term panels of graduating seniors found quite low levels of recanting of earlier-reported use of the illegal drugs.[18] There was a higher level of recanting for the psychotherapeutic drugs, which we interpreted as suggesting that adolescents actually may overestimate their use of some of these drugs because of misinformation about definitions that get corrected as they get older. Finally, the great majority of respondents, when asked, say they would answer such questions honestly if they were users.[19]

---

[16] Johnston, L. D., & O'Malley, P. M. (1985). Issues of validity and population coverage in student surveys of drug use. In B. A. Rouse, N. J. Kozel, & L. G. Richards (Eds.), *Self-report methods of estimating drug use: Meeting current challenges to validity* (NIDA Research Monograph No. 57 (ADM) 85-1402). Washington, D.C.: U.S. Government Printing Office; Johnston, L. D., O'Malley, P. M., & Bachman, J. G. (1984). *Drugs and American high school students: 1975-1983.* DHHS (ADM) 85-1374. Washington, D.C.: U.S. Government Printing Office; Wallace, J. M., Jr., & Bachman, J. G. (1993). Validity of self-reports in student-based studies on minority populations: Issues and concerns. In M. de LaRosa (Ed.), *Drug abuse among minority youth: Advances in research and methodology.* NIDA Research Monograph. Rockville, MD: National Institute on Drug Abuse.

[17] O'Malley, P. M., Bachman, J. G., & Johnston, L. D. (1983). Reliability and consistency in self-reports of drug use. *International Journal of the Addictions, 18,* 805-824.

This is not to argue that self-reported measures of drug use are valid in all cases. In the present study we have gone to great lengths to create a situation and set of procedures in which students feel that their confidentiality will be protected. We have also tried to present a convincing case as to why such research is needed. We think the evidence suggests that a high level of validity has been obtained. Nevertheless, insofar as any remaining reporting bias exists, we believe it to be in the direction of underreporting. Thus, we believe our estimates to be lower than their true values, even for the obtained samples, but not substantially so.

One procedure we undertake to help assure the validity of our data is worth noting. We check for logical inconsistencies in the triplets of answers about the use of each drug (i.e., about lifetime, past year, and past 30-day use), and if a respondent exceeds a minimum number of inconsistencies, his or her record is deleted from the data set. Similarly, we check for improbably high rates of use of multiple drugs and delete such cases, on the assumption that the respondents are not taking the task seriously. Relatively few cases are eliminated for these reasons.

Consistency and the Measurement of Trends

One further point is worth noting in a discussion of the validity of the findings. The Monitoring the Future project is designed to be sensitive to changes from one time period to another. One great strength of this study, in our opinion, is that the measures and procedures have been standardized and applied consistently across many years. To the extent that any biases remain because of limits in school and/or student participation, and to the extent that there are distortions (lack of validity) in the responses of some students, it seems very likely that such problems will exist in much the same way from one year to the next. In other words, biases in the survey estimates will tend to be consistent from one year to another, which means that our measurement of *trends* should be affected very little by any such biases. The smooth and consistent nature of most trend curves reported for the various drugs provides rather compelling empirical support for this assertion.

---

[18] Johnston, L. D. & O'Malley, P. M. (1997). The recanting of earlier reported drug use by young adults. In Harrison, L. (Ed.), *The validity of self-reported drug use: Improving the accuracy of survey estimates* (pp. 59-80). (NIDA Research Monograph 167, pp 59-79). Rockville, MD: National Institute on Drug Abuse.

[19] For a discussion of reliability and validity of student self-report measures of drug use like those used in Monitoring the Future across varied cultural settings, see also Johnston, L. D., Driessen, F. M. H. M., & Kokkevi, A. (1994). *Surveying student drug misuse: A six-country pilot study.* Strasbourg, France: Council of Europe.

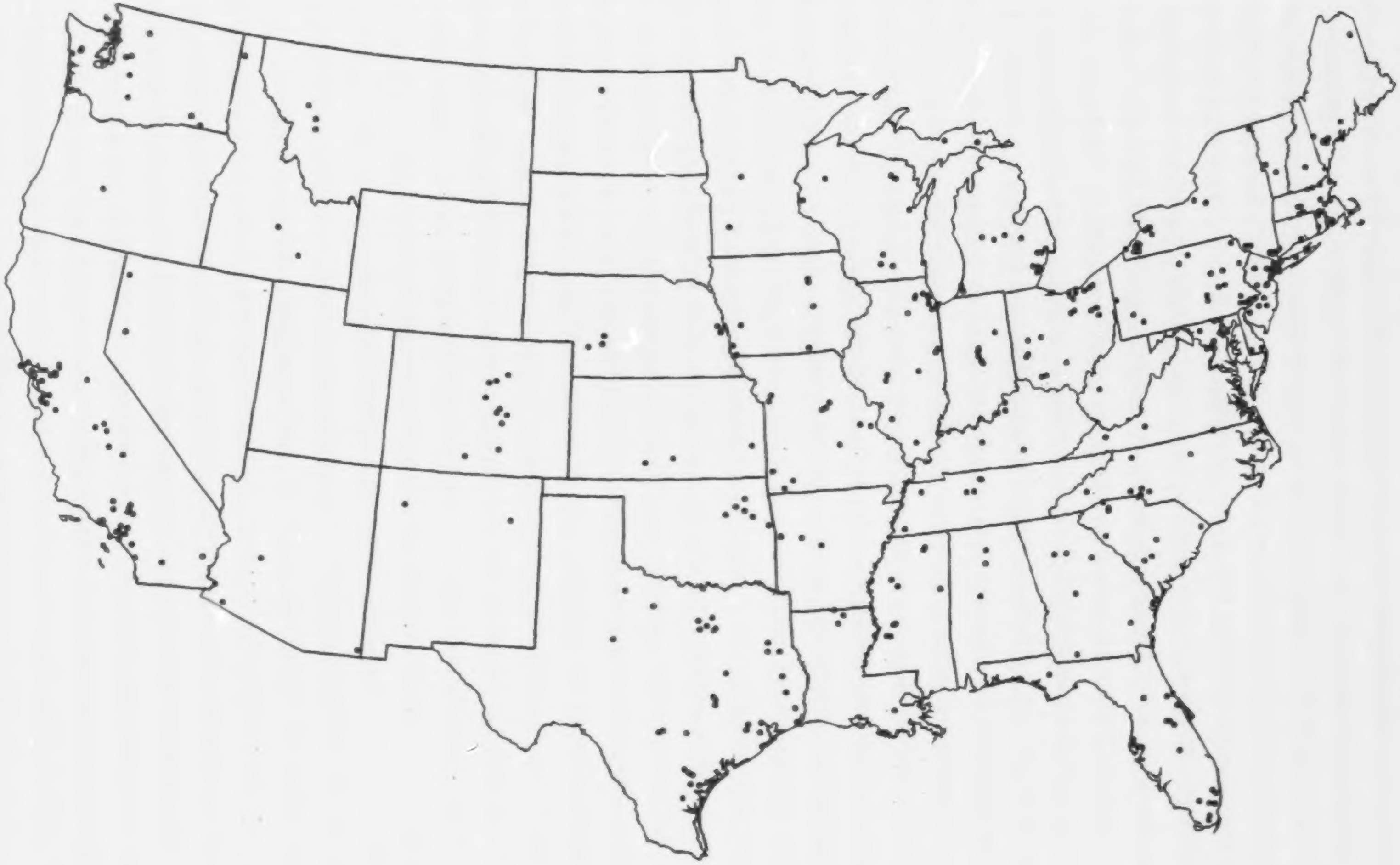
TABLE 3-1

Sample Sizes and Response Rates

	Number of Public Schools			Number of Private Schools			Total Number of Schools				Total Number of Students				Student Response Rate		
Grade:	8th	10th	12th	8th	10th	12th	8th	10th	12th	Total	8th	10th	12th	Total	8th	10th	12th
1975	—	—	111	—	—	14	—	—	125	—	—	—	15,791	—	—	—	78%
1976	—	—	108	—	—	15	—	—	123	—	—	—	16,678	—	—	—	77
1977	—	—	108	—	—	16	—	—	124	—	—	—	18,436	—	—	—	79
1978	—	—	111	—	—	20	—	—	131	—	—	—	18,924	—	—	—	83
1979	—	—	111	—	—	20	—	—	131	—	—	—	16,662	—	—	—	82
1980	—	—	107	—	—	20	—	—	127	—	—	—	16,524	—	—	—	82
1981	—	—	109	—	—	19	—	—	128	—	—	—	18,267	—	—	—	81
1982	—	—	116	—	—	21	—	—	137	—	—	—	18,348	—	—	—	83
1983	—	—	112	—	—	22	—	—	134	—	—	—	16,947	—	—	—	84
1984	—	—	117	—	—	17	—	—	134	—	—	—	16,499	—	—	—	83
1985	—	—	115	—	—	17	—	—	132	—	—	—	16,502	—	—	—	84
1986	—	—	113	—	—	16	—	—	129	—	—	—	15,713	—	—	—	83
1987	—	—	117	—	—	18	—	—	135	—	—	—	16,843	—	—	—	84
1988	—	—	113	—	—	19	—	—	132	—	—	—	16,795	—	—	—	83
1989	—	—	111	—	—	22	—	—	133	—	—	—	17,142	—	—	—	86
1990	—	—	114	—	—	23	—	—	137	—	—	—	15,676	—	—	—	86
1991	131	107	117	31	14	19	162	121	136	419	17,844	14,996	15,483	48,323	90%	87%	83
1992	133	106	120	26	19	18	159	125	138	422	19,015	14,997	16,251	50,263	90	88	84
1993	126	111	121	30	17	18	156	128	139	423	18,820	15,516	16,763	51,099	90	86	84
1994	116	116	119	34	14	20	150	130	139	419	17,708	16,080	15,929	49,717	89	88	84
1995	118	117	120	34	22	24	152	139	144	435	17,929	17,285	15,876	51,090	89	87	84
1996	122	113	118	30	20	21	152	133	139	424	18,368	15,873	14,824	49,065	91	87	83
1997	125	113	125	27	18	21	152	131	146	429	19,066	15,778	15,963	50,807	89	86	83
1998	122	110	124	27	19	20	149	129	144	422	18,667	15,419	15,780	49,866	88	87	82
1999	120	117	124	30	23	19	150	140	143	433	17,287	13,885	14,056	45,228	87	85	83
2000	125	121	116	31	24	18	156	145	134	435	17,311	14,576	13,286	45,173	89	86	83
2001	125	117	117	28	20	17	153	137	134	424	16,756	14,286	13,304	44,346	90	88	82

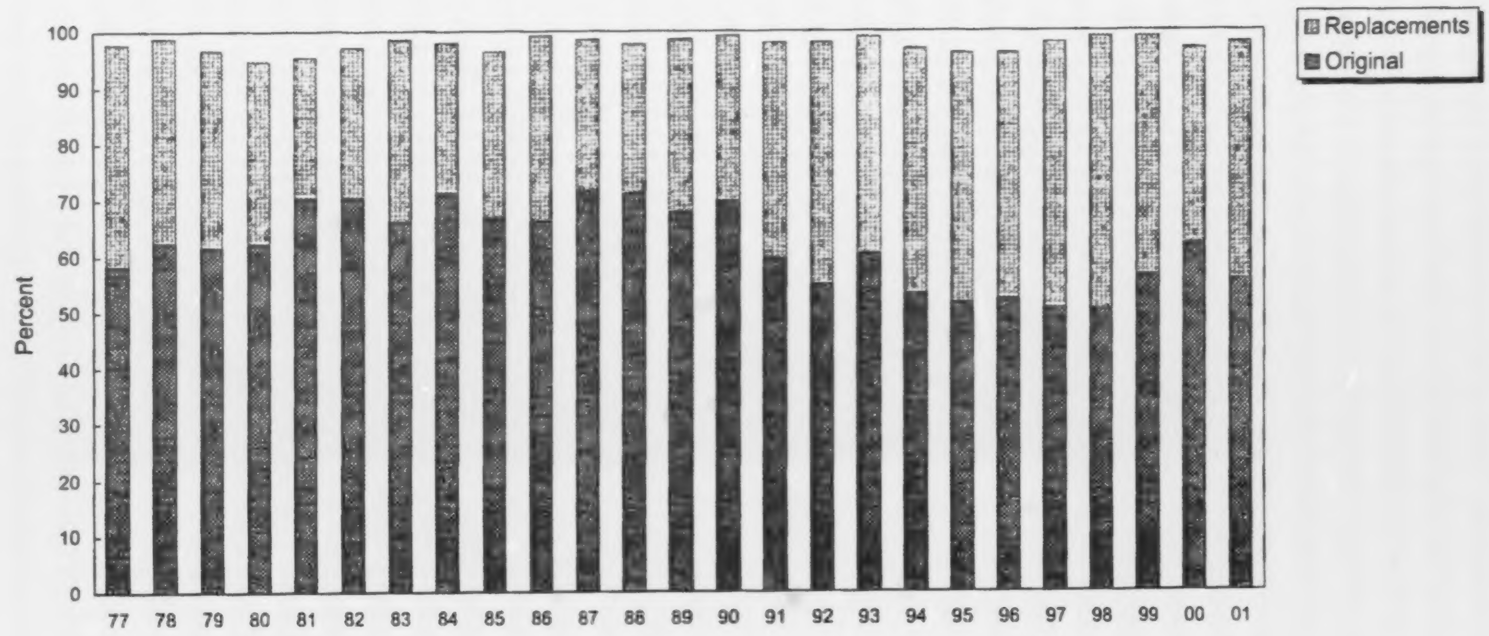
SOURCE: The Monitoring the Future Study, the University of Michigan.

FIGURE 3-1
Schools Included in One Year's Data Collection
Eighth, Tenth and Twelfth Grades



Note: One dot equals one school.

FIGURE 3-2
School Response Rates



	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01
Original	59	63	62	63	71	71	66	72	67	66	72	71	68	70	59	55	60	53	52	53	51	51	57	62	56
Replacements	39	36	35	32	25	26	32	26	29	33	26	26	30	29	39	43	39	44	44	43	47	48	42	35	42
Total	98	99	97	95	96	97	99	98	96	99	99	98	99	99	98	98	99	97	96	96	98	99	99	97	98

Chapter 4

PREVALENCE OF DRUG USE IN EARLY AND MIDDLE ADULTHOOD

Longitudinal panel data are used most commonly to study change in individuals over time, and the panel data gathered each year as part of the Monitoring the Future study are no exception. However, because the panels are based on nationally representative samples of many contiguous graduating high school classes, they can also be used to characterize age bands of all high school graduates in a given year. In other words, we can treat them as cross-sectional data representing various age groups in 2001, for instance. That is how these panel data are used in this chapter.

As described in more detail in Chapter 3, the Monitoring the Future study conducts ongoing panel studies on representative samples from each graduating class, beginning with the class of 1976. Two matched subpanels, of roughly 1,200 seniors each, are selected from each graduating class—one panel is surveyed every even-numbered year after graduation, the other is surveyed every odd-numbered year. Thus, in a given year, the study encompasses one of the panels from each of the last 14 senior classes previously participating in the study. Because the study design calls for an end of biennial follow-ups of these panels after the respondents reach approximately age 32 (i.e., seven follow-ups for each half panel), the (older) classes of 1976 through 1986 were not included in the standard 2001 follow-up surveys. In 2001, this meant that representative samples of the classes of 1987 through 2000 were surveyed by mail. For brevity, we refer to the 19- through 32-year-old age group as "young adults" in this chapter.

Additional surveys are conducted at age 35 (that is, 17 years after high school graduation) and at five-year intervals thereafter. In 2001, the class of 1984 received the "age 35" follow-up questionnaire, and the class of 1979 received the "age 40" questionnaire. The findings from these special questionnaires are included in this chapter, which now covers the age interval from 18 to 40.

The results of the 2001 follow-up survey should accurately characterize approximately 86% of all young adults in the class cohorts 1 to 14 years beyond high school (modal ages 19 to 32). The remaining 15% or so, the high school dropout segment, was missing from the senior year surveys and, of course, is missing from all of the follow-up surveys as well, so the results presented here are not generalizable to that part of the population.

Figures 4-1 through 4-20 contain the 2001 *prevalence* data by age, corresponding to those respondents 1 to 14 years beyond high school (modal ages 19 to 32). Figures provided in Chapter 5 contain the *trend* data for each age group, including seniors and graduates who are up to 14 years past high school (modal age 32). With the exception of the twelfth graders, age groups have been paired into two-year intervals in both sets of figures in order to increase the number of cases, and thus the reliability, for each point estimate. The data for ages 35 and 40 are of necessity based on a single age in each case. Both half samples from a given class cohort are included in the samples of 35- and 40-year-olds; in 2001 that means the graduating classes of 1984 and 1979, respectively. Their respective weighted Ns are 950 and 1,040.

It is worth noting that the pattern of age-related differences showing up in any one year can be checked in an adjacent year (i.e., the previous year's volume or the succeeding year's) for replicability, because two non-overlapping half samples of follow-up respondents have been used.

A NOTE ON ADJUSTED LIFETIME PREVALENCE ESTIMATES

In Figures 4-1 through 4-20, two different estimates of lifetime prevalence are provided. One estimate is based on the respondent's most recent statement of whether he or she ever used the drug in question (the light gray bar). The other estimate takes into account the respondent's answers regarding lifetime use gathered in *all* of the previous data collections in which he or she participated (the white bar). *To be categorized as one who has used the drug based on all past answers regarding that drug, the respondent must either have reported past use in the most recent data collection and/or some use in his or her lifetime on at least two earlier occasions.* Because respondents in the age groups of 18-year-olds and 19- to 20-year-olds cannot have their responses adjusted on the basis of two earlier occasions, adjusted prevalence rates are reported only for ages 21 and older. An unadjusted estimate is most commonly presented in epidemiological studies, since it can be made based on the data from a single cross-sectional survey. An adjusted estimate of the type used here is possible only when panel data have been gathered, so that a respondent can be classified as having used a drug at some time in his or her life, based on earlier answers, even though he or she no longer indicates lifetime use in the most recent survey.

The divergence of these two estimates as a function of age shows that there is more inconsistency as time passes. Obviously, there is more opportunity for inconsistency as the number of data collections increases. Our judgment is that "the truth" lies somewhere between the two estimates: the lower estimate may be depressed by tendencies to forget, forgive, or conceal earlier use, and the upper estimate may include earlier response errors or incorrect definitions of drugs that respondents appropriately corrected in later surveys. It should be noted that a fair proportion of those giving inconsistent answers across time had earlier reported having used only once or twice in their lifetime. As we have reported elsewhere, cross-time stability of self-reported usage measures, which take into account the number of occasions of self-reported use, is still very high.[20]

It also should be noted that the divergence between the two lifetime prevalence estimates is greatest for the psychotherapeutic drugs and for the derivative index of "use of an illicit drug other than marijuana," which is heavily affected by the psychotherapeutic estimates. We believe this is due to respondents having greater difficulty accurately categorizing psychotherapeutic drugs (usually taken in pill form) with a high degree of certainty—especially if such a drug was used only once or twice. We expect higher inconsistency across time when the event—and in many of these cases, a single event—is reported with a relatively low degree of certainty at quite different points in time. Those who have gone beyond simple experimentation with one of these drugs would undoubtedly be able to categorize them with a higher degree of certainty. Also, those who have experimented more recently, in the past month or year, should have a higher probability of recall, as well as fresher information for accurately categorizing the drug.

---

[20] O'Malley, P. M., Bachman, J. G., & Johnston, L. D. (1983). Reliability and consistency in self-reports of drug use. *International Journal of the Addictions, 18*, 805-824.

We provide both estimates to make clear that a full use of respondent information provides a possible range for lifetime prevalence estimates, not a single point. However, by far the most important use of the prevalence data is to track *trends* in *current* (as opposed to lifetime) use. Thus, we are much less concerned about the nature of the variability in the lifetime estimates than we might otherwise be. The lifetime prevalence estimates are primarily of importance in showing the degree to which a drug class has penetrated the general population.[21]

The reader is reminded that the reweighting procedures used to correct the panel data for the effects of panel attrition are described in Chapter 3.

PREVALENCE OF DRUG USE AS A FUNCTION OF AGE

For virtually all drugs, available age comparisons show a much higher lifetime prevalence for the older age groups. In fact, the figures reach impressive levels among young adults in their early thirties.

- In 2001, the adjusted lifetime prevalence figures among 31- to 32-year-olds reach 72% for ***any illicit drug***, 68% for ***marijuana***, 49% for ***any illicit drug other than marijuana***, and 23% for ***cocaine***. Put another way, among young Americans who graduated from high school in 1987 and 1988—somewhat after the peak of the larger drug epidemic—only about one-quarter (28%) have never tried an illegal drug.

  The 2001 survey responses, *unadjusted* for previous answers, show somewhat lower lifetime prevalence: 65% for ***any illicit drug***, 63% for ***marijuana***, 36% for ***any illicit drug other than marijuana***, and 19% for ***cocaine***.

- As impressive as the data are for 31- and 32-year-olds, the data are most impressive for today's 40-year-olds, who were passing through adolescence in the peak of the drug epidemic. Some 85% of them have admitted trying an ***illicit drug*** (lifetime prevalence, adjusted), leaving only 15% who have not made such an admission. Some 78% said they had tried ***marijuana***, but 70% said they had tried some ***other illicit drug***, including 44% who had tried ***cocaine***. Clearly the parents of today's teenagers are themselves a very drug-experienced generation.

---

[21] For a more detailed analysis and discussion, see Johnston, L. D. & O'Malley, P. M. (1997). The recanting of earlier-reported drug use by young adults. In L. Harrison & A. Hughes (Eds.), *The validity of self-reported drug use: Improving the accuracy of survey estimates.* (NIDA Research Monograph No. 97-4147.) Washington, DC: National Institute on Drug Abuse.

- Despite the higher levels of lifetime use among older age groups, they generally show levels of *annual* or *current* use that are no higher than such use among today's high school seniors. In fact, for a number of drugs the levels reported by older respondents are lower, suggesting that the incidence of quitting more than offsets the incidence of initiation of the use of these drugs after high school.

  In analyses published elsewhere, we looked closely at patterns of change in drug use and identified some post-high school experiences that contribute to declining levels of annual or current use as respondents grow older. For example, the likelihood of marriage increases with age, and we have found that marriage is consistently associated with declines in ***alcohol*** use in general, ***heavy drinking***, ***marijuana*** use, and ***cocaine*** use.[22]

- For the use of ***any illicit drug***, lifetime prevalence is 65% among 31- to 32-year-olds versus "only" 54% among the 2001 high school seniors. Annual prevalence, however, is highest among the seniors (41%) with progressively lower rates among the older age groups, reaching 20% among the 31- to 32-year-olds (see Figure 4-1). Current (30-day) prevalence shows much the same pattern, with seniors having the highest rate (26%) and the rate declining gradually for each of the older age groups, reaching 12% among the 31- to 32-year-olds.

- Interestingly enough, the annual and 30-day prevalence rates found among the 35- and 40-year-olds for ***marijuana***, ***any illicit drug***, and ***any illicit drug other than marijuana*** are all virtually identical to the rates observed among the 31- to 32-year-olds. (This is also true for many of the other specific illicit drugs.) Yet more (and sometimes substantially more) of the 35- and 40-year-old cohorts (the classes of 1984 and 1979) have reported some use of marijuana and other illicit drugs in their lifetime than had the 31–32-year-old cohorts (the classes of 1987 and 1988). Thus, greater proportions of the older cohorts have discontinued use, but current use remains the same between the groups because a higher percentage of the 35- and 40-year-olds had used earlier in their lives.

- Among the young adults, a similar pattern exists for ***marijuana***: a higher lifetime prevalence as a function of age, but considerably lower annual and 30-day prevalence rates through the late twenties. Current ***daily marijuana*** use shows the least variation across age (as shown in Figure 5-3c). Still, in 2001 it ranges from 5.8% among twelfth graders, to 2.3% among 27- and 28-year-olds, and 2.6% among 31- to 32-year-olds. Daily use in 2001 is 2.3% for 35-year-olds and 1.8% for 40-year-olds.

- Statistics on the use of ***any illicit drug other than marijuana*** (Figure 4-2) have a similar pattern. Like marijuana and the any-illicit-drug-use index, corrected lifetime rates on this index also show an appreciable rise with age level, reaching 49% among the 31- to 32-year-old age group and 70% among the 40-year-olds. Current use shows a decline across the age bands, ranging from 11% among seniors, to 5% among 31- to 32-year-olds, and 4% among the 35- and 40-year-olds. Annual use is lower with increased age of the respondent through age 40. In fact, most of the individual drugs that constitute this general category show lower rates of use at higher ages for annual prevalence. This is particularly true for ***amphetamines***, ***hallucinogens***, ***LSD*** specifically, ***inhalants***, ***barbiturates***, ***heroin***, ***narcotics other than heroin***, and ***tranquilizers***. The falloff with age is not as great, nor as consistent for ***cocaine***, ***crack***, ***other cocaine***, ***ice***, or ***MDMA (ecstasy)***, though in general usage rates are somewhat lower among those in their early thirties than among those in their early twenties. Several classes of drugs are discussed individually next.

---

[22] Bachman, J. G., Wadsworth, K. N., O'Malley, P. M., Johnston, L. D., & Schulenberg, J. (1997). *Smoking, drinking, and drug use in young adulthood: The impacts of new freedoms and new responsibilities.* Mahwah, NJ: Lawrence Erlbaum Associates.

- ***Inhalants*** show some very interesting differences across the age strata. There is little difference in contemporaneously reported lifetime prevalence across age, but a considerable difference in the lifetime prevalence figure adjusted for previous reporting of use. The adjusted pattern is the one we have come to expect, with an increase with age. And annual and 30-day prevalence rates drop off with age, also as expected, except that 30-day use falls to zero by age 21-22. Clearly the use of inhalants is extremely low beyond about age 20.

- For ***amphetamines***, lifetime prevalence is again much higher among the older age groups—reflecting the addition of many new users who initiate use in their twenties (Figure 4-4). (There is also a considerable divergence between the corrected lifetime prevalence versus the contemporaneously reported lifetime prevalence, as is true for most of the psychotherapeutic drugs.) However, more recent use as reflected in the annual prevalence figure is lower among the older age groups. This has not always been true; the present pattern is the result of a sharper decline in use among older respondents than has occurred among seniors. These trends are discussed in the next chapter.

- Questions on the use of ***crystal methamphetamine*** (***ice***) are contained in two of the six questionnaire forms, making the estimates less reliable than those based on all six forms. (Ice use is not asked of the 35- or 40-year-old respondents.) Among the 19- to 32-year-old respondents *combined*, 0.9% reported some use in the prior year—lower than the 2.5% reported by seniors (see Table 4-1 and Figure 4-16).

- ***Barbiturates*** are similar to amphetamines in that lifetime prevalence, adjusted, is higher in the older ages and annual use appreciably lower (Figure 4-12). At present, current usage rates are quite low in all age groups; therefore 30-day use varies rather little by age. Because of the substantial long-term decline in barbiturate use over the life of the study, the 40-year-olds have by far the highest adjusted lifetime prevalence rate.

- ***Narcotics other than heroin*** show age differences similar to those seen for barbiturates—somewhat higher lifetime prevalence as a function of age, annual prevalence modestly lower at increasing age levels, and 30-day use varying rather little with age (Figure 4-13).

- ***Tranquilizer*** use shows an increase with age in lifetime prevalence and some modest decrease with age in annual prevalence. Thirty-day prevalence is fairly flat across all age groups (Figure 4-14).

- ***Cocaine*** generally had presented a unique case among the illicit drugs in that lifetime, annual, and current prevalence rates have *all* tended to be higher among the older age groups (Figure 4-5). By 1994, however, 30-day cocaine use had reached such low levels that it varied rather little by age; since then, annual and current use have been fairly similar across all age groups. The annual prevalence rate is highest (and fairly flat at present) between ages 18 and 28.

- In 2001, lifetime prevalence of ***crack*** use reached 4% among high school seniors, 6% to 7% (adjusted) among those in their late twenties and early thirties, 12% among the 35-year-olds, yet only 10% among 40-year-olds. This curvilinear pattern no doubt reflects something of a cohort effect due to the rather transient popularity of crack in the early to mid-1980s. Current prevalence is very low at all ages. On average, the follow-up respondents 1 to 14 years out of high school have an annual prevalence of 1.2% versus 2.1% among seniors, and a 30-day prevalence of 0.4% versus 1.1% among seniors. Clearly the follow-up respondents have a higher rate of noncontinuation than seniors, as is true for most other drugs.

  We believe that the omission of high school dropouts is likely to have a greater than average impact on the prevalence estimates for crack. It also seems likely that any members of the panels who are dependent on crack (or other illicit drugs, like heroin, for that matter) would be less likely than average to respond to the questionnaires; therefore, such extreme users are no doubt underrepresented among the panel respondents.

- In 1989, ***MDMA (ecstasy)*** was added to two of the six forms of the follow-up surveys to assess how widespread its use had become among young adults. Questions about its use were not asked of high school students until 1996, primarily because we were concerned that its alluring name might have the effect of stimulating interest. We were less concerned about such an effect after the name of the drug had become more widely known. (MDMA is not asked of the 35- or 40-year-old respondents.)

  Among all 19- to 32-year-olds combined, 11% say they have ever tried ***MDMA***, and among high school seniors, 12% say they have used it. The age differences are quite different for this drug than nearly all others, however, with lifetime prevalence highest at ages 21-22 and generally declining with age thereafter. This very likely reflects the fact that ecstasy use has risen very rapidly in just the past few years. Annual prevalence is much lower among those more than 24 years of age (Figure 4-15).

Clearly past-year and past-month ecstasy use is concentrated among those in their late teens and early twenties, through age 24.

- In the case of ***alcohol***, all prevalence rates are higher among those of post-high school age than among those in high school, and they generally increase for the first three or four years after high school, through age 21 or 22 (Figure 4-19a). After that, prevalence rates vary only modestly among the different age groups. Lifetime prevalence changes very little after ages 23 to 24, due in large part to a "ceiling effect." Current (30-day) alcohol use is considerably higher among those aged 21-22 (72%) than among seniors (50%); it stays fairly flat through age 32 (68%) and is slightly lower after that. Current ***daily drinking*** varies rather little by age, though it is lowest among those aged 18 (4%) and highest among those aged 40 (8%) (Figure 4-19b).

- Among the various measures of alcohol consumption, ***occasions of heavy drinking*** in the two weeks prior to the survey show large differences among the age groups (Figure 4-19b). There is a fair difference between 18-year-olds (30%) and 21- to 22-year-olds, who have the highest prevalence of such heavy drinking (42%). Then there is a falloff at each subsequent age level, reaching 24% by age 31 to 32. We have interpreted this curvilinear relationship as reflecting an age effect—and not a cohort effect—because it seems to replicate across different graduating class cohorts, and also because it has been linked directly to age-related events such as leaving the parental home (which increases heavy drinking) and marriage (which decreases it).[23] Among those 35 and 40 years of age, about one-fourth (25% and 26%, respectively) report such heavy drinking in the prior two-week interval—about the same proportion as among 31- to 32-year-olds (24%).

- ***Cigarette smoking*** also shows an unusual pattern of age-related differences (Figure 4-20). On the one hand, current (30-day) smoking is about the same among those in their early twenties as among high school seniors, in part reflecting the fact that relatively few new people are recruited to smoking after high school. On the other hand, smoking at heavier levels—such as smoking half a pack daily—is somewhat higher among those in their twenties than among high school seniors, reflecting the fact that many previously moderate smokers move into a pattern of heavier consumption after high school.[24] While slightly more than a third (35%) of the current smokers in high school smoke at the rate of a half-pack per day or more, over one-half (56%) of the current smokers in the 31- to 32-age group do so.

---

[23] O'Malley, P. M., Bachman, J. G., & Johnston, L. D. (1988). Period, age, and cohort effects on substance use among young Americans: A decade of change, 1976-1986. *American Journal of Public Health, 78*, 1315-1321. See also Bachman et al. (1997). *Smoking, drinking, and drug use in young adulthood: The impacts of new freedoms and new responsibilities.* Mahwah, NJ: Lawrence Erlbaum Associates.

[24] Because age is confounded with class cohort, and because we have established that cigarette smoking shows strong cohort effects (enduring differences among cohorts), one must be careful in interpreting age-related differences in a cross-sectional sample as if they were due only to age effects, i.e., changes with age consistently observable across cohorts. However, multivariate analyses conducted on panel data from multiple cohorts do show a consistent age effect of the type mentioned here (O'Malley, Bachman, & Johnston, 1988, *op. cit.*).

BEST COPY AVAILABLE

- Questions about use of ***steroids*** were added in 1989 to one form only (and to an additional form in 1990), making it difficult to determine age-related differences with much accuracy due to the limited sample sizes. (Steroids are not asked of the 35- or 40-year-old respondents.) Overall, 1.6% of 19- to 32-year-olds in 2001 reported having used steroids in their lifetime. Annual and 30-day use levels were very low, at 0.3% and 0.2%, respectively. (See Tables 4-2 to 4-4.) The rates among seniors tend to be considerably higher than the rates among older age groups, which may reflect both age and cohort effects. (As described in Volume I, the prevalence of steroid use among seniors rose sharply in recent years.)

- In essence, lifetime prevalence rates in some of the older age groups studied here, who passed through adolescence in the heyday of the drug epidemic, show impressively high lifetime rates of illicit drug use—particularly when lifetime prevalence is corrected for the recanting of earlier reported use. However, the *current* use of most illicit drugs is substantially lower among those in their thirties and forties than among those in their late teens to early twenties. For the two licit drugs, alcohol and cigarettes, the picture is a more complicated one. Steroids also present a more complicated picture.

PREVALENCE COMPARISONS FOR SUBGROUPS OF YOUNG ADULTS

Gender Differences

Statistics on usage rates for the group of young adults 1 to 14 years beyond high school (modal ages 19 to 32) are given for the total sample and separately for males and females in Tables 4-1 to 4-5. In general, most of the gender differences in drug use that pertained in high school may be found in the young adult sample as well.

- Among young adults, somewhat more males than females report using ***any illicit drug*** during the prior year (32% versus 27%). Males have higher annual prevalence rates for nearly all of the specific illicit drugs—with the highest ratios (7 and 8) pertaining to ***steroids*** and ***PCP***, respectively, and with ratios greater than 2 for ***heroin***, and ***inhalants***. For example, among the 19- to 32-year-olds, heroin was used by 0.7% of males versus 0.3% of females during the prior twelve months.

- All forms of ***cocaine*** were used in the past year by more males than females (19- to 32-year-olds). Annual ***cocaine*** use was reported by 6.8% of the males and 3.9% of the females, ***crack*** use by 1.6% of the males and 0.9% of the females, and ***other cocaine*** use by 6.1% of the males and 3.4% of the females.

- Other large gender differences among the 19- to 32-year-olds are found in ***daily marijuana*** use (5.7% for males versus 3.4% for females in 2001), ***daily alcohol*** use (7.2% versus 2.4%), and occasions of drinking ***five or more drinks in a row*** in the prior two weeks (45% versus 25%). This gender difference in occasions of heavy drinking is even greater among young adults than among high school seniors, where it is 36% for males versus 24% for females.

- The use of ***amphetamines***, which is now about equivalent among males and females in high school, is also fairly similar for both genders in this post-high school period (annual prevalence 4.9% versus 4.5%, respectively).

- ***Crystal methamphetamine*** (***ice***) is used by small percentages of both genders, and by about the same fraction of both genders (1.0% annual prevalence for males versus 0.9% for females).

- In the 1980s, there were few differences between males and females in rate of ***cigarette*** use. By the early 1990s, however, there were slightly higher rates of use by males. Among high school seniors, past month prevalence in 2001 is 30% for males, compared to 29% for females. Daily use rates are 18% and 20%, respectively, and half-pack or more use rates are 10% for both males and females. The patterns are similar among the 19- to 32-year-olds, with males slightly more likely to have smoked in the past month (29% versus 27%), to have smoked daily (20% versus 19%), and to have smoked half a pack or more per day (15% versus 13%).

- ***Steroid*** use among young adults is much more prevalent among males than females, as is true for seniors. Among seniors, 3.8% of the males reported steroid use in the past year versus 1.1% of the females. These statistics are much lower among the 19- to 32-year-olds (0.7% for males versus 0.1% for females).

- ***MDMA*** (***ecstasy***) use is somewhat higher among males than among females in the young adult sample overall (annual prevalence 6.5% versus 5.6%, respectively).

Regional Differences

Follow-up respondents are asked in what state they currently reside. States are then grouped into the same regions used in the analysis of the high school data.[25] Tables 4-2 through 4-5 present regional differences in lifetime prevalence, annual prevalence, 30-day prevalence, and current daily prevalence, for the 19- to 32-year-olds combined.

- Regional differences in use are not very large for ***marijuana***, except that the South and North Central are somewhat lower than the Northeast and the West. They are also somewhat lower in the proportion using ***any illicit drug***.

---

[25] States are grouped into regions as follows: ***Northeast***—Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, and Pennsylvania; ***North Central***—Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas; ***South***—Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida, Kentucky, Tennessee, Alabama, Mississippi, Arkansas, Louisiana, Oklahoma, and Texas; ***West***—Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Washington, Oregon, and California.

- The use of ***crystal methamphetamine*** (***ice***) by 19- to 32-year-olds is concentrated primarily in the Western region of the country, which has a 1.9% annual prevalence rate versus 0.4% to 0.9% in the other regions. Among high school seniors, the West also has a higher rate of use than the other three regions.

- While the regional differences are not large for ***hallucinogen*** use, the West and North Central have higher rates than the other two regions.

- ***MDMA***, "***ecstasy***," use is highest in the Northeast (8.0%) and West (6.9% annual prevalence) and lower in the South (5.6%) and the North Central (4.5%).

- For the remaining illicit drugs, regional differences are not substantial (see Tables 4-3 and 4-4). Still, like the high school seniors, the young adults in the South report the highest rates of ***barbiturate*** use.

- Prevalence rates for ***alcohol*** are typically somewhat higher in the Northeast and North Central regions than in the Southern and Western parts of the country, as generally has been true among seniors. For ***binge drinking***, the Northeast and North Central have prevalence rates of 39% and 38%, respectively, whereas the South and West have rates of 28% and 31%—a fair difference.

- As with alcohol, ***cigarette smoking*** among young adults is highest in the Northeast and North Central. It is lowest in the West. This difference is most pronounced at the half-pack-a-day level, where the rate in the West (8.7%) is half the rate in the North Central (17.4 %).

Population Density Differences

Population density is measured by asking respondents to check which of a number of listed alternatives best describes the size and nature of the community where they lived during March of the year in which they were completing the follow-up questionnaire. The major answer alternatives are listed in Table 4-2, and the population size given to the respondent to help define each level is provided in a footnote. An examination of the 1987 and 1988 drug-use data for the two most urban strata revealed that the modest differences in prevalence rates between the suburbs and the corresponding cities were not worth the complexity of reporting them separately; accordingly, these categories have been merged. See Tables 4-3 through 4-5 for the relevant tabular results that are discussed below.

- Differences in illicit drug use by population density tend to be very modest, perhaps more modest than is commonly supposed. Among the general population, use of most illicit drugs is fairly broadly distributed among all areas from rural to urban. To the extent that there are variations, almost all of the associations are positive, with rural/country areas having the lowest levels of use, and small towns having the next lowest. Medium-sized cities, large cities, and very large cities tend to be higher, with only small variations among these three categories. The modest positive association, based on annual prevalence, is true for ***any illicit drug*** use, ***marijuana***, ***hallucinogens***, ***tranquilizers***, and *MDMA* (*ecstasy*). On the other hand, there is now a slight negative association between population density and the annual prevalence of ***crack*** use (which is true among seniors, as well). ***Heroin*** use shows the lowest rates this year in the large and very large cities.

- Among young adults, the lifetime, annual, and 30-day ***alcohol*** use measures all show a slight positive association with population density. ***Occasions of heavy drinking*** are about the same across all strata except farm/country, which has a slightly lower rate (see Table 4-5). ***Daily*** use falls between 3.6% and 5.1% for all community size strata, with no discernible association.

- A *negative*, ordinal association exists between population density and ***daily cigarette smoking***, which is highest in the farm/country stratum and lowest in the very large cities (daily prevalence rates of 24% and 14%, respectively). Smoking at the half-pack-a-day level is twice as high in farm/country areas (18%) as in very large cities (9%). (See Table 4-5.)

TABLE 4-1

Prevalence of Use of Various Types of Drugs by Gender, 2001 Among Respondents of Modal Age 19-32

(Entries are percentages)

	Males	**Females**	**Total**
Approx. Weighted N =	*3300*	*4500*	*7800*
Any Illicit Drug[a]			
Annual	31.8	27.1	29.1
Thirty-Day	19.6	14.5	16.6
Any Illicit Drug[a] Other than Marijuana			
Annual	15.2	13.0	13.9
Thirty-Day	7.1	5.7	6.3
Marijuana			
Annual	29.5	23.4	26.0
Thirty-Day	17.8	12.4	14.7
Daily	5.7	3.4	4.4
Inhalants[b,c]			
Annual	2.1	0.9	1.4
Thirty-Day	0.4	0.3	0.3
Hallucinogens[b]			
Annual	5.8	3.4	4.4
Thirty-Day	1.4	0.7	1.0
LSD			
Annual	3.9	1.9	2.7
Thirty-Day	0.7	0.4	0.6
PCP[d]			
Annual	0.8	0.1	0.4
Thirty-Day	0.0	0.0	0.0
MDMA (Ecstasy)[e]			
Annual	6.5	5.6	6.0
Thirty-Day	1.8	1.2	1.4
Cocaine			
Annual	6.8	3.9	5.1
Thirty-Day	2.7	1.5	2.0
Crack			
Annual	1.6	0.9	1.2
Thirty-Day	0.5	0.3	0.4
Other Cocaine[f]			
Annual	6.1	3.4	4.6
Thirty-Day	2.1	1.3	1.6
Heroin			
Annual	0.7	0.3	0.4
Thirty-Day	0.4	0.1	0.2
Other Narcotics[g]			
Annual	5.4	3.8	4.5
Thirty-Day	1.8	1.3	1.5

(Table continued on next page)

TABLE 4-1 (cont.)

Prevalence of Use of Various Types of Drugs by Gender, 2001
Among Respondents of Modal Age 19-32

(Entries are percentages)

	Males	Females	Total
Approx. Weighted N =	*3300*	*4500*	*7800*
Amphetamines, Adjusted[g,h]			
Annual	4.9	4.5	4.7
Thirty-Day	2.0	2.0	2.0
Crystal Methamphetamine (Ice)[e]			
Annual	1.0	0.9	0.9
Thirty-Day	0.4	0.3	0.3
Barbiturates[g]			
Annual	3.4	2.8	3.0
Thirty-Day	1.4	1.3	1.3
Tranquilizers[g]			
Annual	5.7	4.5	5.0
Thirty-Day	2.1	1.6	1.8
Alcohol			
Annual	86.0	83.1	84.3
Thirty-Day	74.5	61.7	67.2
Daily	7.2	2.4	4.4
5+ drinks in a row in the last 2 weeks	44.9	24.8	33.3
Cigarettes			
Annual	39.5	36.5	37.8
Thirty-Day	29.0	26.8	27.7
Daily	20.4	19.1	19.6
Half-pack or more per day	14.8	13.2	13.9
Steroids[e]			
Annual	0.7	0.1	0.3
Thirty-Day	0.4	0.0	0.2

Source: The Monitoring the Future Study, the University of Michigan.

'*' indicates a prevalence rate of less than 0.05% but greater than true zero.

[a] Use of "any illicit drug" includes any use of marijuana, hallucinogens, cocaine, or heroin, or any use of other narcotics, amphetamines, barbiturates, or tranquilizers not under a doctor's orders.

[b] Unadjusted for known underreporting of certain drugs. See text for details.

[c] This drug was asked about in three of the six questionnaire forms. Total N is approximately 3900.

[d] This drug was asked about in one of the six questionnaire forms. Total N is approximately 1300.

[e] This drug was asked about in two of the six questionnaire forms. Total N is approximately 2600.

[f] This drug was asked about in four of the six questionnaire forms. Total N is approximately 5200.

[g] Only drug use which was not under a doctor's orders is included here.

[h] Based on the data from the revised question, which attempts to exclude the inappropriate reporting of nonprescription amphetamines.

TABLE 4-2

Lifetime Prevalence of Use of Various Types of Drugs by Subgroups, 2001 Among Respondents of Modal Age 19-32

(Entries are percentages)

	Approx. Weighted N	Any Illicit Drug[a]	Any Illicit Drug[a] Other than Marijuana	Marijuana	Inhalants[b,c]	Hallucinogens[b]	LSD	PCP[d]	MDMA[e]	Cocaine
Total	*7800*	59.4	32.3	57.0	13.2	18.7	16.1	2.7	11.3	14.1
Gender:										
Male	*3300*	61.0	34.4	59.1	17.7	22.7	19.9	4.6	13.3	17.0
Female	*4500*	58.2	30.8	55.3	9.8	15.8	13.3	1.3	9.8	12.0
Modal Age:										
19-20	*1200*	55.4	28.3	52.6	11.1	15.2	13.1	2.6	14.1	10.8
21-22	*1100*	59.9	33.5	58.1	13.4	20.8	17.9	4.4	18.2	14.2
23-24	*1200*	60.0	29.9	58.3	12.0	17.7	14.6	3.0	12.7	12.2
25-26	*1100*	57.4	33.8	54.9	14.8	21.0	19.0	3.9	10.1	14.3
27-28	*1200*	58.0	32.8	54.6	13.1	17.1	15.7	1.5	9.9	14.2
29-30	*1000*	61.1	32.6	58.0	13.1	18.9	16.0	0.5	7.3	15.0
31-32	*1000*	65.0	36.1	63.1	14.9	20.7	16.5	2.5	6.4	18.9
Region:										
Northeast	*1400*	64.7	34.7	62.9	14.2	20.6	16.8	3.9	13.8	15.7
North Central	*2200*	59.4	31.4	57.4	12.7	18.3	16.1	2.8	7.6	12.0
South	*2700*	54.4	29.4	51.4	11.8	15.4	13.6	1.8	10.7	12.5
West	*1500*	63.2	36.2	60.5	15.0	23.0	19.6	2.9	14.8	18.1
Population Density[f]:										
Farm/Country	*900*	53.6	31.2	50.2	10.0	15.1	13.8	5.1	7.6	15.0
Small Town	*2100*	57.9	31.6	55.2	13.7	17.1	15.2	2.4	10.6	12.7
Medium City	*1800*	60.0	32.2	57.2	13.4	18.3	16.1	1.2	10.7	13.9
Large City	*1800*	60.8	31.8	58.9	12.5	18.9	15.5	3.1	11.0	13.6
Very Large City	*1200*	62.5	34.9	60.9	15.3	24.1	19.6	3.1	16.0	16.4

Source: The Monitoring the Future Study, the University of Michigan.

[a] Use of "any illicit drug" includes any use of marijuana, hallucinogens, cocaine, or heroin, or any use of other narcotics, amphetamines, barbiturates, or tranquilizers not under a doctor's orders.

[b] Unadjusted for known underreporting of certain drugs. See text for details.

[c] This drug was asked about in three of the six questionnaire forms. Total N is approximately 3900.

[d] This drug was asked about in one of the six questionnaire forms. Total N is approximately 1300.

[e] This drug was asked about in two of the six questionnaire forms. Total N is approximately 2600.

[f] A small town is defined as having less than 50,000 inhabitants; a medium city as 50,000-100,000; a large city as 100,000-500,000; and a very large city as having over 500,000 residents. Within each level of population density, suburban and urban respondents are combined.

(Table continued on next page)

BEST COPY AVAILABLE

TABLE 4-2 (cont.)

Lifetime Prevalence of Use of Various Types of Drugs by Subgroups, 2001 Among Respondents of Modal Age 19-32

(Entries are percentages)

	Approx. Weighted N	Crack	Heroin	Narcotics[a]	Amphtetamines[a,b]	Ice[c]	Barbiturates[a]	Tranquilizers[a]	Alcohol	Cigarettes	Steroids[c]
Total	*7800*	4.7	1.9	11.2	15.2	3.8	7.7	12.0	90.8	NA	1.6
Gender:											
Male	*3300*	6.3	2.6	13.6	16.3	4.9	8.9	13.1	90.7	NA	3.5
Female	*4500*	3.6	1.3	9.5	14.4	2.9	6.8	11.2	90.9	NA	0.2
Modal Age:											
19-20	*1200*	4.1	2.1	12.1	14.8	3.7	8.1	10.3	82.0	NA	1.5
21-22	*1100*	4.8	2.3	13.6	16.5	4.4	9.3	13.7	90.6	NA	1.4
23-24	*1200*	4.2	1.9	11.2	14.0	4.0	7.0	11.3	91.6	NA	1.8
25-26	*1100*	5.4	2.1	11.1	15.1	4.6	8.3	13.0	93.3	NA	0.7
27-28	*1200*	4.8	1.5	9.6	14.5	3.5	6.3	11.3	92.4	NA	1.8
29-30	*1000*	3.9	1.4	10.3	14.3	2.8	7.5	11.7	92.5	NA	2.5
31-32	*1000*	5.8	1.8	10.6	17.5	2.7	7.3	13.3	94.4	NA	1.3
Region:											
Northeast	*1400*	4.6	2.0	11.1	13.9	1.0	7.3	12.1	94.1	NA	2.9
North Central	*2200*	4.2	1.6	11.1	16.2	2.9	7.2	9.1	93.5	NA	0.5
South	*2700*	4.1	1.7	10.4	14.2	2.3	8.6	13.9	88.1	NA	2.1
West	*1500*	6.6	2.2	12.9	16.9	10.1	7.3	13.0	88.5	NA	1.0
Population Density[d]:											
Farm/Country	*900*	6.2	2.0	11.8	18.1	4.6	9.3	12.3	86.8	NA	1.2
Small Town	*2100*	5.2	1.9	11.0	15.5	2.9	8.1	11.9	90.4	NA	1.3
Medium City	*1800*	4.4	2.0	10.2	15.9	4.0	7.1	11.7	90.4	NA	1.0
Large City	*1800*	3.9	1.5	11.0	14.1	4.5	7.3	11.2	93.0	NA	1.5
Very Large City	*1200*	4.0	2.1	12.7	12.8	3.6	7.0	13.7	92.3	NA	2.9

Source: The Monitoring the Future Study, the University of Michigan.

'NA' indicates data not available.

[a] Only drug use which was not under a doctor's orders is included here.
[b] Based on the data from the revised question, which attempts to exclude the inappropriate reporting of nonprescription amphetamines.
[c] This drug was asked about in two of the six questionnaire forms. Total N is approximately 2600.
[d] A small town is defined as having less than 50,000 inhabitants; a medium city as 50,000-100,000; a large city as 100,000-500,000; and a very large city as having over 500,000 residents. Within each level of population density, suburban and urban respondents are combined.

BEST COPY AVAILABLE

TABLE 4-3

Annual Prevalence of Use of Various Types of Drugs by Subgroups, 2001 Among Respondents of Modal Age 19-32

(Entries are percentages)

	Approx. Weighted N	Any Illicit Drug[a]	Any Illicit Drug[a] Other than Marijuana	Marijuana	Inhalants[b,c]	Hallucinogens[b]	LSD	PCP[d]	MDMA[e]	Cocaine
Total	*7800*	29.1	13.9	26.0	1.4	4.4	2.7	0.4	6.0	5.1
Gender:										
Male	*3300*	31.8	15.2	29.5	2.1	5.8	3.9	0.8	6.5	6.8
Female	*4500*	27.1	13.0	23.4	0.9	3.4	1.9	0.1	5.6	3.9
Modal Age:										
19-20	*1200*	38.4	18.0	35.4	3.4	9.0	6.4	1.0	11.0	6.0
21-22	*1100*	40.2	20.0	37.5	2.4	8.1	4.7	1.0	10.8	7.5
23-24	*1200*	31.1	14.1	28.3	0.9	4.6	2.5	0.8	6.8	5.4
25-26	*1100*	27.4	13.3	25.0	0.8	3.1	1.7	0.0	4.3	5.4
27-28	*1200*	22.9	11.4	19.4	1.0	1.8	1.3	0.0	4.1	4.8
29-30	*1000*	21.1	9.9	17.1	0.7	1.7	1.1	0.0	2.6	2.8
31-32	*1000*	20.2	9.7	16.7	0.5	1.5	0.7	0.0	1.4	3.5
Region:										
Northeast	*1400*	34.4	15.6	31.6	2.3	4.5	2.7	1.0	8.0	6.3
North Central	*2200*	27.8	12.6	24.7	1.0	4.7	3.2	0.4	4.5	4.7
South	*2700*	25.2	12.9	22.1	1.5	3.7	2.7	0.4	5.6	4.3
West	*1500*	32.5	16.0	28.8	0.8	5.0	2.3	0.0	6.9	6.0
Population Density[f]:										
Farm/Country	*900*	24.3	13.5	21.1	1.3	3.7	2.7	1.0	4.9	5.5
Small Town	*2100*	28.4	13.6	25.4	1.7	4.7	3.5	0.5	6.3	4.8
Medium City	*1800*	29.9	14.7	25.8	1.2	4.5	2.9	0.1	5.9	5.3
Large City	*1800*	29.3	13.7	26.5	0.7	4.3	2.2	0.3	5.2	4.6
Very Large City	*1200*	31.8	14.0	29.5	2.1	4.4	2.0	0.5	7.4	3.9

Source: The Monitoring the Future Study, the University of Michigan.

'*' indicates a percentage of less than 0.05% but greater than true zero.

[a] Use of "any illicit drug" includes any use of marijuana, hallucinogens, cocaine, or heroin, or any use of other narcotics, amphetamines, barbiturates, or tranquilizers not under a doctor's orders.

[b] Unadjusted for known underreporting of certain drugs. See text for details.

[c] This drug was asked about in three of the six questionnaire forms. Total N is approximately 3900.

[d] This drug was asked about in one of the six questionnaire forms. Total N is approximately 1300.

[e] This drug was asked about in two of the six questionnaire forms. Total N is approximately 2600.

[f] A small town is defined as having less than 50,000 inhabitants; a medium city as 50,000-100,000; a large city as 100,000-500,000; and a very large city as having over 500,000 residents. Within each level of population density, suburban and urban respondents are combined.

(Table continued on next page)

TABLE 4-3 (cont.)

Annual Prevalence of Use of Various Types of Drugs by Subgroups, 2001
Among Respondents of Modal Age 19-32

(Entries are percentages)

	Approx. Weighted N	Crack	Heroin	Narcotics[a]	Amphetamines[a,b]	Ice[c]	Barbiturates[a]	Tranquilizers[a]	Alcohol	Cigarettes	Steroids[c]
Total	*7800*	1.2	0.4	4.5	4.7	0.9	3.0	5.0	84.3	37.8	0.3
Gender:											
Male	*3300*	1.6	0.7	5.4	4.9	1.0	3.4	5.7	86.0	39.5	0.7
Female	*4500*	0.9	0.3	3.8	4.5	0.9	2.8	4.5	83.1	36.5	0.1
Modal Age:											
19-20	*1200*	1.7	1.0	7.0	8.7	1.9	5.2	6.1	77.6	44.9	0.4
21-22	*1100*	1.4	0.5	6.8	7.9	0.9	4.8	7.1	87.0	46.6	0.9
23-24	*1200*	1.1	0.5	4.3	5.2	0.6	3.4	5.4	86.7	42.1	0.0
25-26	*1100*	1.0	0.3	3.7	3.6	1.1	2.7	5.3	86.3	39.2	0.0
27-28	*1200*	1.3	0.3	3.1	3.2	0.8	2.1	3.9	84.2	32.6	0.6
29-30	*1000*	0.7	0.2	2.9	1.9	0.3	1.3	4.2	84.3	29.2	0.3
31-32	*1000*	1.0	*	2.9	1.5	0.7	1.1	3.0	84.4	27.4	0.0
Region:											
Northeast	*1400*	1.2	0.3	4.6	4.9	0.4	3.0	4.5	90.3	38.9	0.5
North Central	*2200*	1.3	0.5	4.2	4.8	0.6	2.9	3.9	88.2	42.5	0.4
South	*2700*	1.0	0.4	4.1	4.7	0.9	3.6	6.2	79.3	34.9	0.3
West	*1500*	1.4	0.4	5.2	4.5	1.9	2.4	5.1	82.0	34.2	0.3
Population Density[d]:											
Farm/Country	*900*	1.4	0.5	4.9	5.5	1.0	3.0	4.7	77.3	39.3	0.5
Small Town	*2100*	1.6	0.4	4.5	5.3	1.2	3.5	5.1	82.8	38.9	0.1
Medium City	*1800*	1.3	0.7	4.4	5.3	0.8	2.7	5.3	84.7	38.1	0.3
Large City	*1800*	0.8	0.2	4.3	4.4	1.0	3.1	4.2	87.2	36.2	0.4
Very Large City	*1200*	0.7	0.3	4.1	2.7	0.6	2.4	6.0	87.5	35.3	0.5

Source: The Monitoring the Future Study, the University of Michigan.

'*' indicates a percentage of less than 0.05% but greater than true zero.

[a] Only drug use which was not under a doctor's orders is included here.

[b] Based on the data from the revised question, which attempts to exclude the inappropriate reporting of non-prescription amphetamines.

[c] This drug was asked about in two of the six questionnaire forms. Total N is approximately 2600.

[d] A small town is defined as having less than 50,000 inhabitants; a medium city as 50,000-100,000; a large city as 100,000-500,000; and a very large city as having over 500,000 residents. Within each level of population density, suburban and urban respondents are combined.

BEST COPY AVAILABLE

TABLE 4-4

Thirty-Day Prevalence of Use of Various Types of Drugs by Subgroups, 2001 Among Respondents of Modal Age 19-32

(Entries are percentages)

	Approx. Weighted N	Any Illicit Drug[a]	Any Illicit Drug[a] Other than Marijuana	Marijuana	Inhalants[b,c]	Hallucinogens[b]	LSD	PCP[d]	MDMA[e]	Cocaine
Total	*7800*	16.6	6.3	14.7	0.3	1.0	0.6	0.0	1.4	2.0
Gender:										
Male	*3300*	19.6	7.1	17.8	0.4	1.4	0.7	0.0	1.8	2.7
Female	*4500*	14.5	5.7	12.4	0.3	0.7	0.4	0.0	1.2	1.5
Modal Age:										
19-20	*1200*	23.0	8.4	21.0	0.8	2.3	1.6	0.0	2.5	2.4
21-22	*1100*	24.9	9.3	22.9	0.5	2.0	1.3	0.0	2.6	3.0
23-24	*1200*	17.2	6.7	14.9	0.3	1.0	0.1	0.0	1.6	2.1
25-26	*1100*	16.0	5.5	14.5	0.5	0.4	0.3	0.0	0.7	1.6
27-28	*1200*	12.5	5.3	10.3	0.0	0.4	0.2	0.0	1.5	2.0
29-30	*1000*	9.8	3.8	8.3	0.4	0.4	0.2	0.0	0.9	1.3
31-32	*1000*	11.6	4.5	9.6	0.0	0.4	0.0	0.0	0.3	1.6
Region:										
Northeast	*1400*	19.6	6.2	18.0	0.3	0.7	0.4	0.0	2.1	2.2
North Central	*2200*	15.5	6.2	13.6	0.3	1.2	0.8	0.0	1.0	2.2
South	*2700*	14.1	6.0	12.2	0.3	0.9	0.6	0.0	1.7	1.8
West	*1500*	19.5	7.1	17.1	0.3	1.2	0.4	0.0	1.1	1.9
Population Density[f]:										
Farm/Country	*900*	12.7	5.4	11.1	0.4	0.7	0.7	0.0	1.9	2.2
Small Town	*2100*	15.6	6.4	13.4	0.5	1.3	0.9	0.0	1.5	2.0
Medium City	*1800*	17.5	7.3	15.3	0.2	1.2	0.6	0.0	1.9	2.2
Large City	*1800*	17.6	5.7	16.1	0.2	0.8	0.3	0.0	1.1	1.5
Very Large City	*1200*	18.0	6.0	16.0	0.5	0.6	0.1	0.0	1.0	2.3

Source: The Monitoring the Future Study, the University of Michigan.

'*' indicates a percentage of less than 0.05% but greater than true zero.

[a] Use of "any illicit drug" includes any use of marijuana, hallucinogens, cocaine, or heroin, or any use of other narcotics, amphetamines, barbiturates, or tranquilizers not under a doctor's orders.

[b] Unadjusted for known underreporting of certain drugs. See text for details.

[c] This drug was asked about in three of the six questionnaire forms. Total N is approximately 3900.

[d] This drug was asked about in one of the six questionnaire forms. Total N is approximately 1300.

[e] This drug was asked about in two of the six questionnaire forms. Total N is approximately 2600.

[f] A small town is defined as having less than 50,000 inhabitants; a medium city as 50,000-100,000; a large city as 100,000-500,000; and a very large city as having over 500,000 residents. Within each level of population density, suburban and urban respondents are combined.

(Table continued on next page)

BEST COPY AVAILABLE

TABLE 4-4 (cont.)

Thirty-Day Prevalence of Use of Various Types of Drugs by Subgroups, 2001 Among Respondents of Modal Age 19-32

(Entries are percentages)

	Approx. Weighted N	Crack	Heroin	Narcotics[a]	Amphetamines[a,b]	Ice[c]	Barbiturates[a]	Tranquilizers[a]	Alcohol	Cigarettes	Steroids[c]
Total	*7800*	0.4	0.2	1.5	2.0	0.3	1.3	1.8	67.2	27.7	0.2
Gender:											
Male	*3300*	0.5	0.4	1.8	2.0	0.4	1.4	2.1	74.5	29.0	0.4
Female	*4500*	0.3	0.1	1.3	2.0	0.3	1.3	1.6	61.7	26.8	0.0
Modal Age:											
19-20	*1200*	0.6	0.4	2.5	3.4	0.9	2.8	2.3	59.0	32.8	0.2
21-22	*1100*	0.3	0.2	2.0	3.4	0.1	1.8	2.4	71.8	34.0	0.2
23-24	*1200*	0.3	0.2	1.5	1.8	0.6	1.4	2.3	70.6	31.1	0.0
25-26	*1100*	0.2	0.2	1.0	1.5	0.2	1.2	1.9	68.7	28.6	0.0
27-28	*1200*	0.5	0.3	1.3	1.7	0.0	1.1	1.4	66.5	24.2	0.3
29-30	*1000*	0.1	*	0.9	0.9	0.3	0.3	1.0	66.2	20.4	0.3
31-32	*1000*	0.5	0.0	1.1	0.8	0.2	0.3	1.1	67.8	21.2	0.0
Region:											
Northeast	*1400*	0.3	0.1	1.6	1.8	0.2	1.1	1.1	74.8	30.4	0.0
North Central	*2200*	0.4	0.1	1.0	2.1	0.3	1.3	1.5	71.6	31.4	0.3
South	*2700*	0.4	0.2	1.4	1.9	0.3	1.7	2.3	60.2	25.8	0.2
West	*1500*	0.4	0.3	2.1	2.1	0.7	0.8	1.9	65.9	23.0	0.0
Population Density[d]:											
Farm/Country	*900*	0.6	0.3	1.5	1.6	0.3	1.5	1.5	58.3	30.4	0.1
Small Town	*2100*	0.5	0.2	1.4	2.4	0.5	1.2	1.7	63.1	30.1	0.0
Medium City	*1800*	0.3	0.4	1.6	2.5	0.2	1.3	2.0	68.5	27.2	0.2
Large City	*1800*	0.4	*	1.5	1.6	0.2	1.5	1.7	69.4	26.2	0.2
Very Large City	*1200*	0.2	0.1	1.2	1.3	0.4	0.8	1.8	75.3	23.6	0.3

Source: The Monitoring the Future Study, the University of Michigan.

'*' indicates a percentage of less than 0.05% but greater than true zero.

[a] Only drug use which was not under a doctor's orders is included here.

[b] Based on the data from the revised question, which attempts to exclude the inappropriate reporting of non-prescription amphetamines.

[c] This drug was asked about in two of the six questionnaire forms. Total N is approximately 2600.

[d] A small town is defined as having less than 50,000 inhabitants; a medium city as 50,000-100,000; a large city as 100,000-500,000; and a very large city as having over 500,000 residents. Within each level of population density, suburban and urban respondents are combined.

BEST COPY AVAILABLE

TABLE 4-5

Thirty-Day Prevalence of Daily Use of Various Types of Drugs by Subgroups, 2001 Among Respondents of Modal Age 19-32

(Entries are percentages)

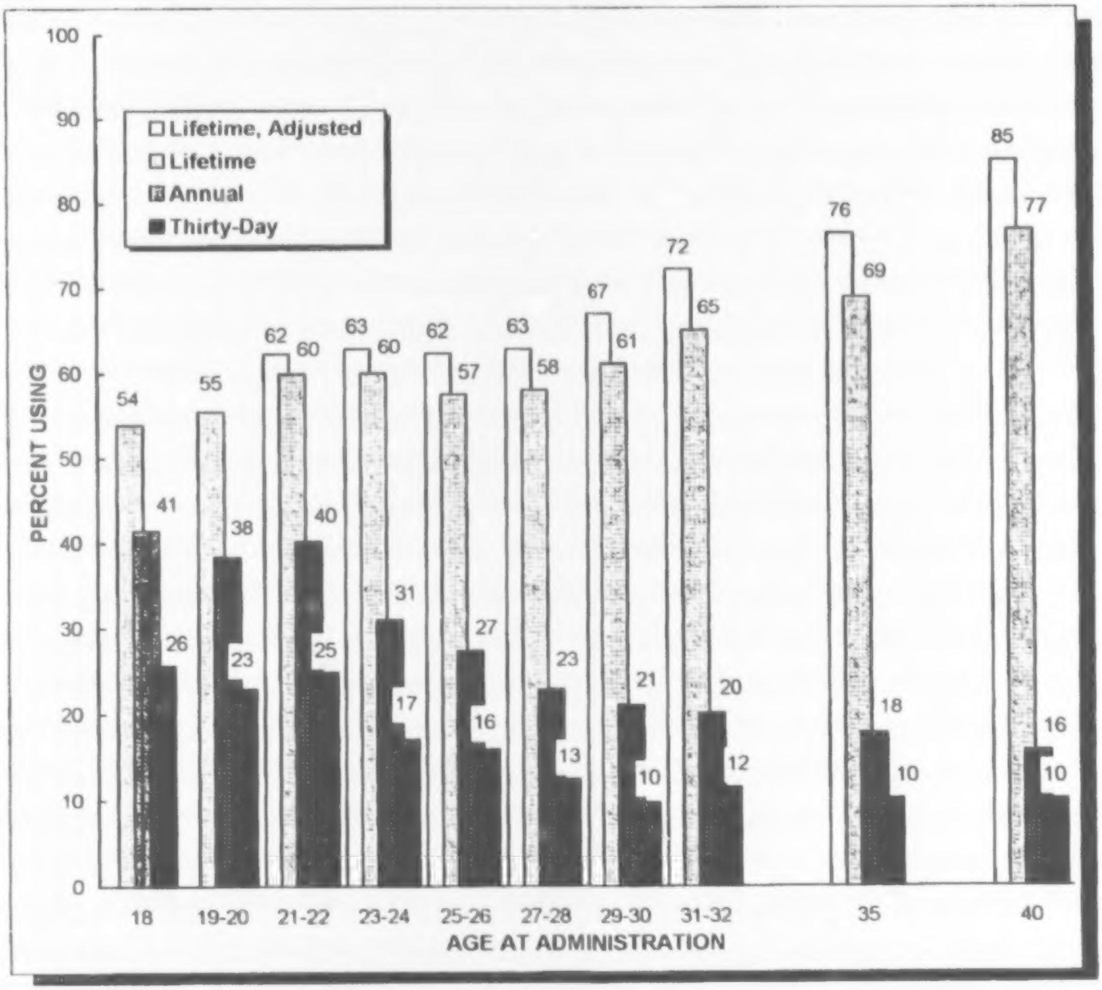
	Approx. Weighted N	Marijuana Daily	Alcohol Daily	Alcohol 5+ drinks in a row in past 2 weeks	Cigarettes Daily	Cigarettes: Half-pack or more per day
Total	*7800*	4.4	4.4	33.3	19.6	13.9
Gender:						
Male	*3300*	5.7	7.2	44.9	20.4	14.8
Female	*4500*	3.4	2.4	24.8	19.1	13.2
Modal Age:						
19-20	*1200*	6.1	3.6	36.3	21.9	13.9
21-22	*1100*	7.0	6.2	42.4	23.6	15.9
23-24	*1200*	4.7	4.6	38.2	22.4	15.8
25-26	*1100*	4.6	5.0	33.7	20.9	15.1
27-28	*1200*	2.3	2.7	29.2	17.2	12.6
29-30	*1000*	2.6	4.3	27.3	14.4	11.4
31-32	*1000*	2.9	4.7	24.3	16.1	11.9
Region:						
Northeast	*1400*	5.0	3.5	38.5	21.8	16.1
North Central	*2200*	4.5	5.4	37.7	23.5	17.4
South	*2700*	3.0	4.1	28.3	18.2	12.9
West	*1500*	6.1	4.2	30.7	14.6	8.7
Population Density[a]:						
Farm/Country	*900*	4.5	4.6	29.8	23.7	18.0
Small Town	*2100*	4.7	5.1	34.0	22.7	16.9
Medium City	*1800*	4.2	3.6	34.1	19.2	13.5
Large City	*1800*	4.0	3.9	33.6	17.4	11.6
Very Large City	*1200*	4.3	4.9	33.0	14.4	8.6

Source: The Monitoring the Future Study, the University of Michigan.

[a] A small town is defined as having less than 50,000 inhabitants; a medium city as 50,000-100,000; a large city as 100,000-500,000; and a very large city as having over 500,000 residents. Within each level of population density, suburban and urban respondents are combined.

FIGURE 4-1

Any Illicit Drug: Lifetime, Annual, and Thirty-Day Prevalence Among High School Seniors and Adults Through Age 40, 2001
by Age Group

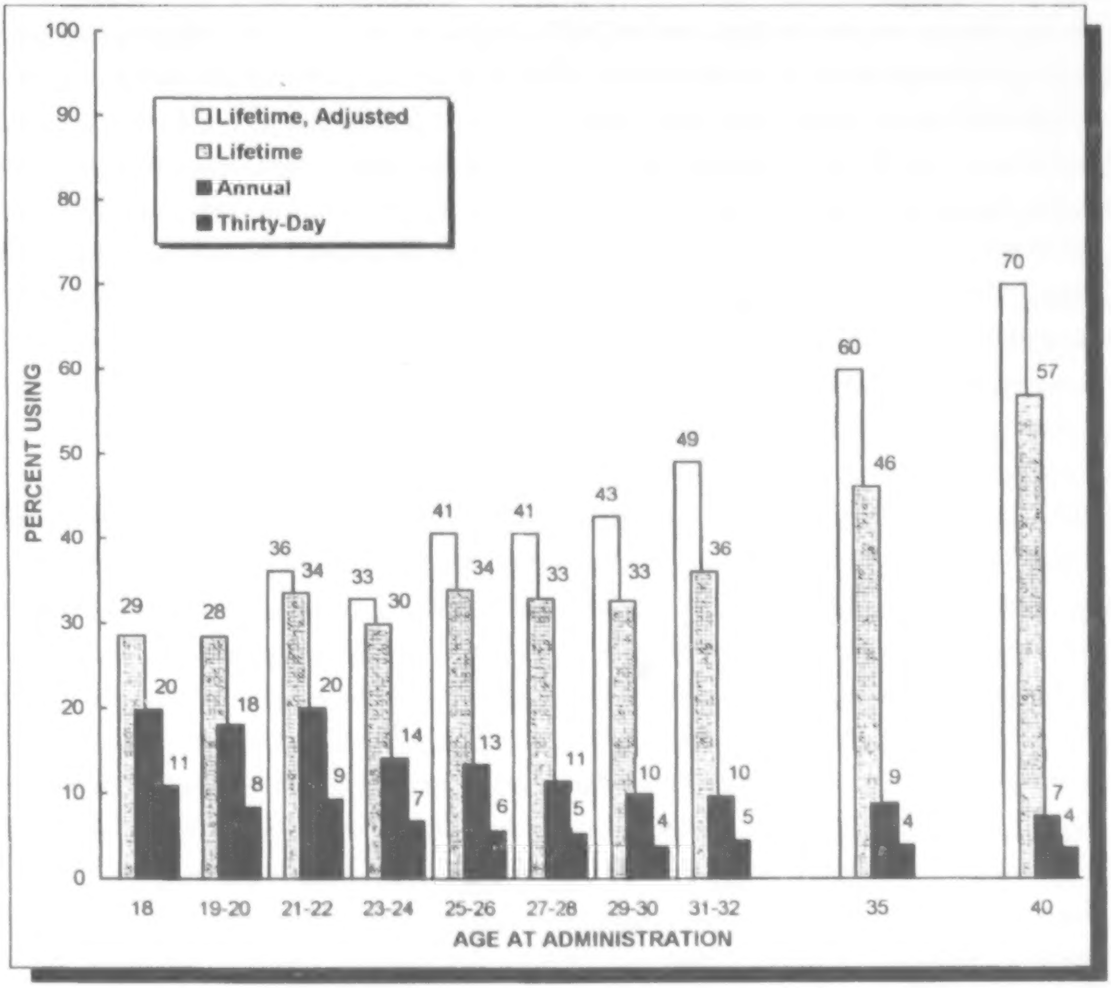


NOTE: Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.

FIGURE 4-2

Any Illicit Drug Other than Marijuana: Lifetime, Annual, and Thirty-Day Prevalence Among High School Seniors and Adults Through Age 40, 2001

by Age Group

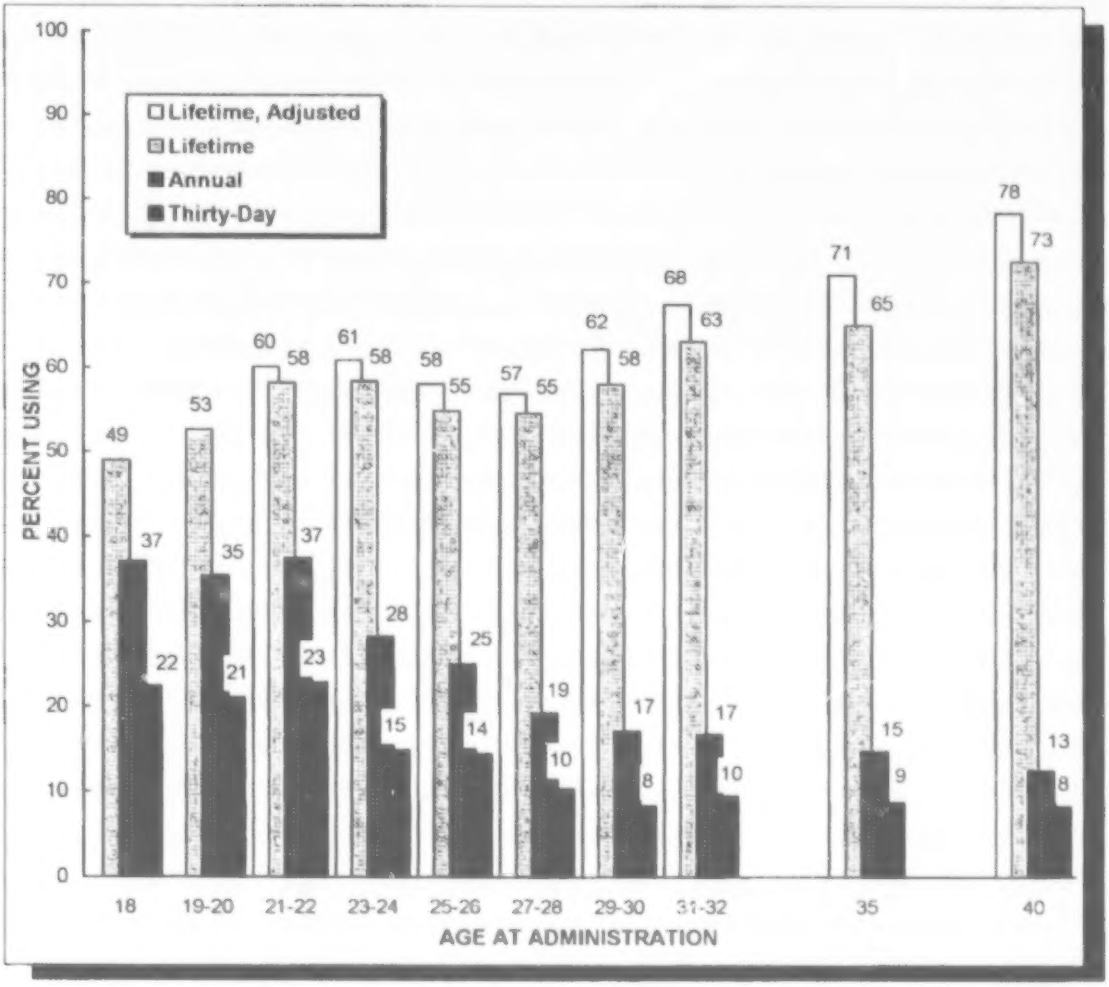


NOTE: Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.

FIGURE 4-3

Marijuana: Lifetime, Annual, and Thirty-Day Prevalence Among High School Seniors and Adults Through Age 40, 2001

by Age Group

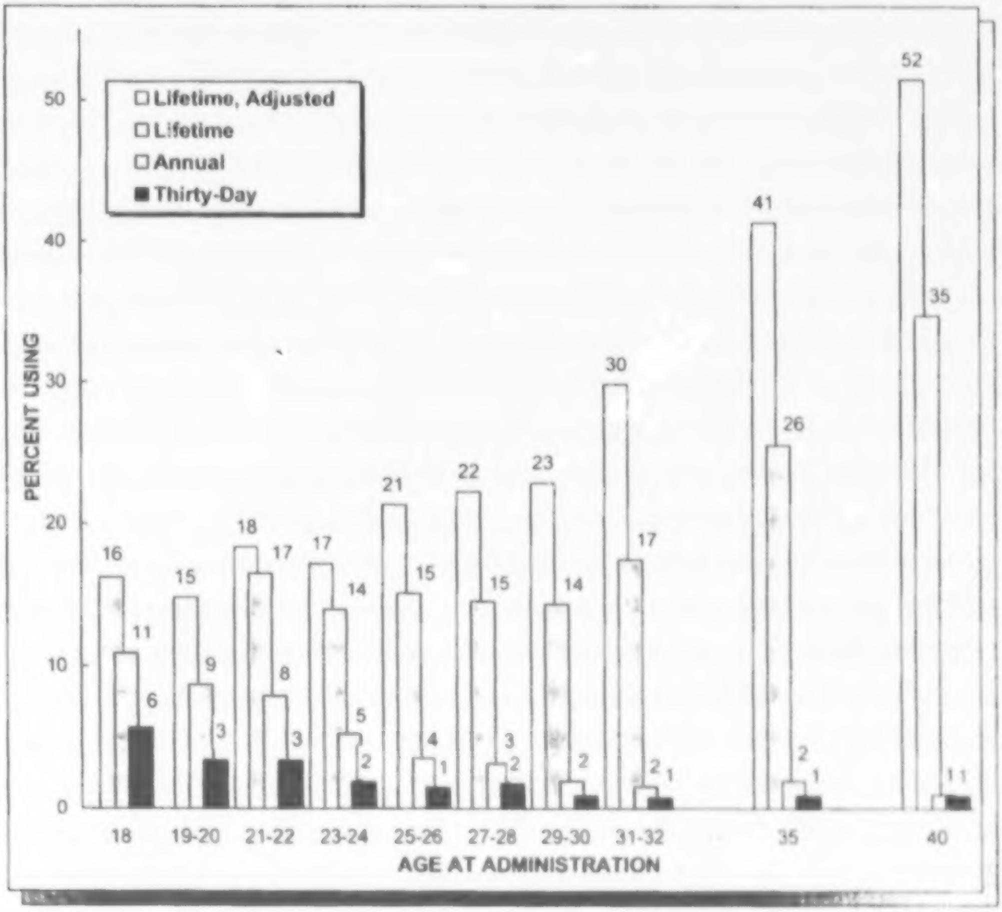


NOTE: Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.

FIGURE 4-4

Amphetamines: Lifetime, Annual, and Thirty-Day Prevalence Among High School Seniors and Adults Through Age 40, 2001

by Age Group

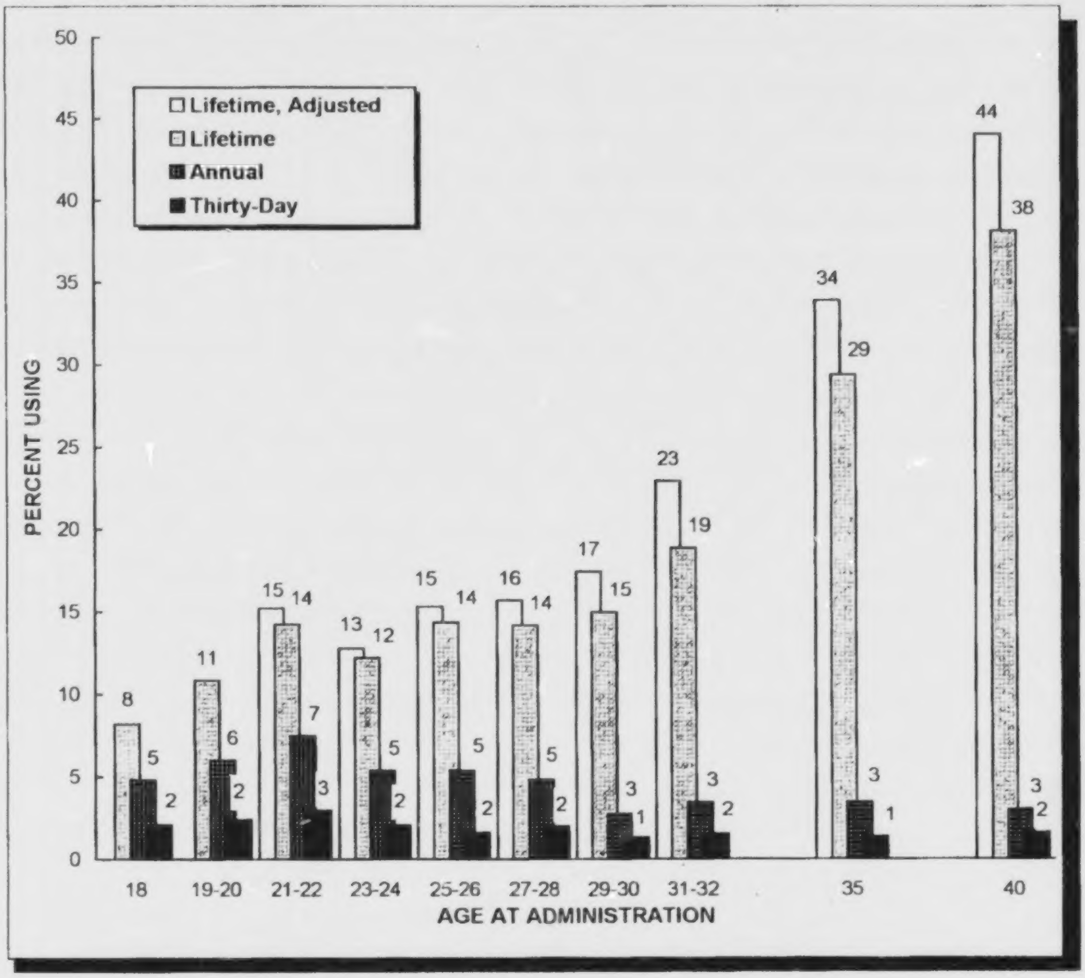


NOTE: Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion. The divergence between the two lifetime prevalence estimates is due in part to the change in question wording initiated in 1982/1983, which clarified the instruction to omit non-prescription stimulants.

BEST COPY AVAILABLE

FIGURE 4-5

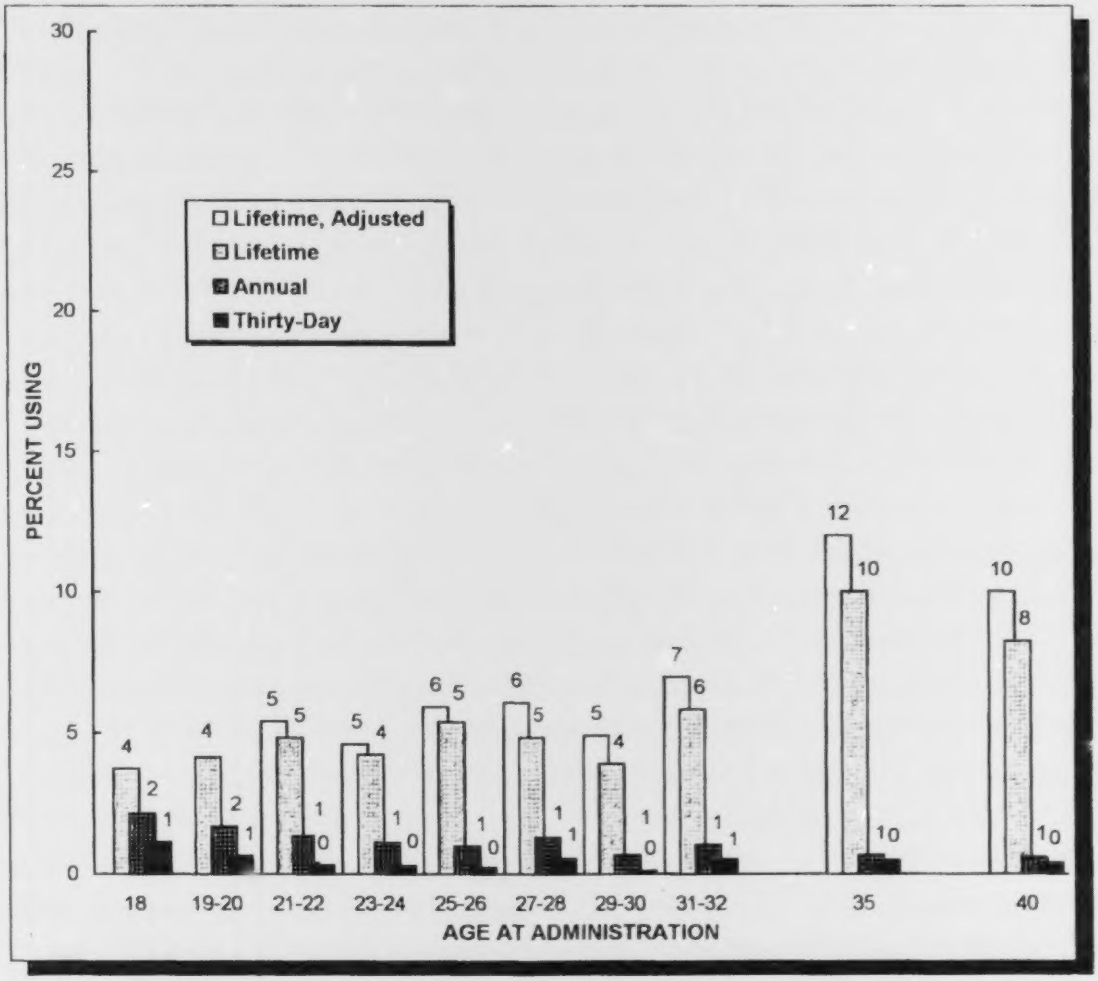
Cocaine: Lifetime, Annual, and Thirty-Day Prevalence Among High School Seniors and Adults Through Age 40, 2001
by Age Group



NOTE: Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.

FIGURE 4-6

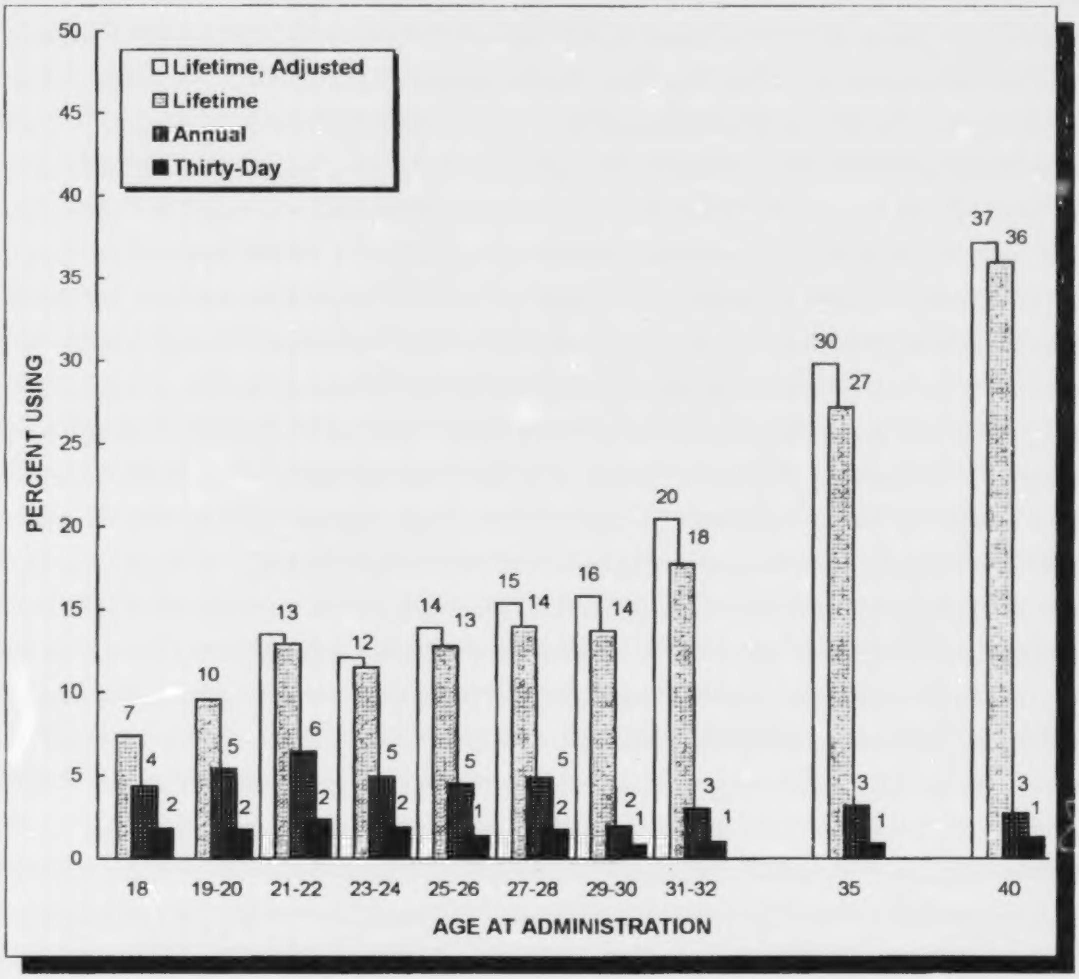
Crack Cocaine: Lifetime, Annual, and Thirty-Day Prevalence Among High School Seniors and Adults Through Age 40, 2001
by Age Group



NOTE: Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.

FIGURE 4-7

Other Cocaine: Lifetime, Annual, and Thirty-Day Prevalence Among High School Seniors and Adults Through Age 40, 2001
by Age Group

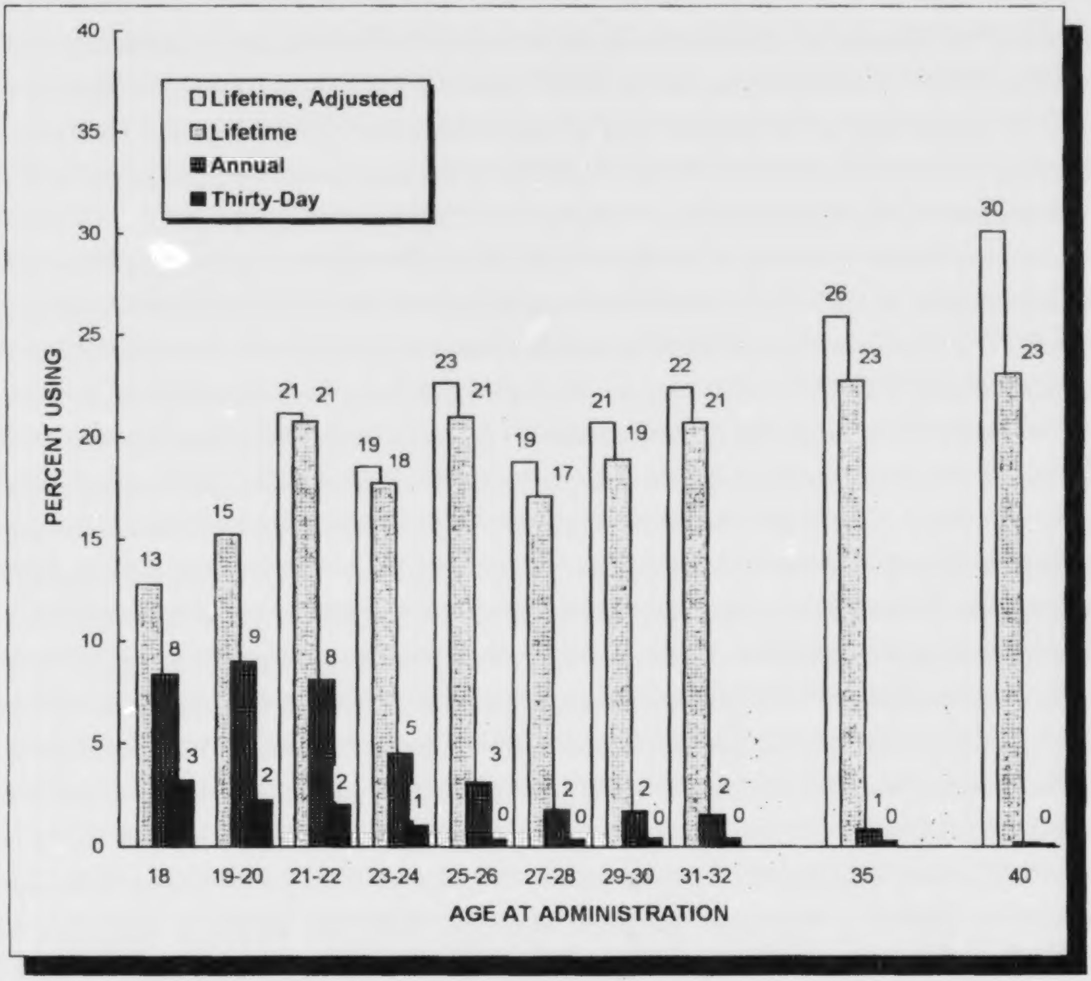


NOTE: Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.

FIGURE 4-8

Hallucinogens*: Lifetime, Annual, and Thirty-Day Prevalence Among High School Seniors and Adults Through Age 40, 2001

by Age Group



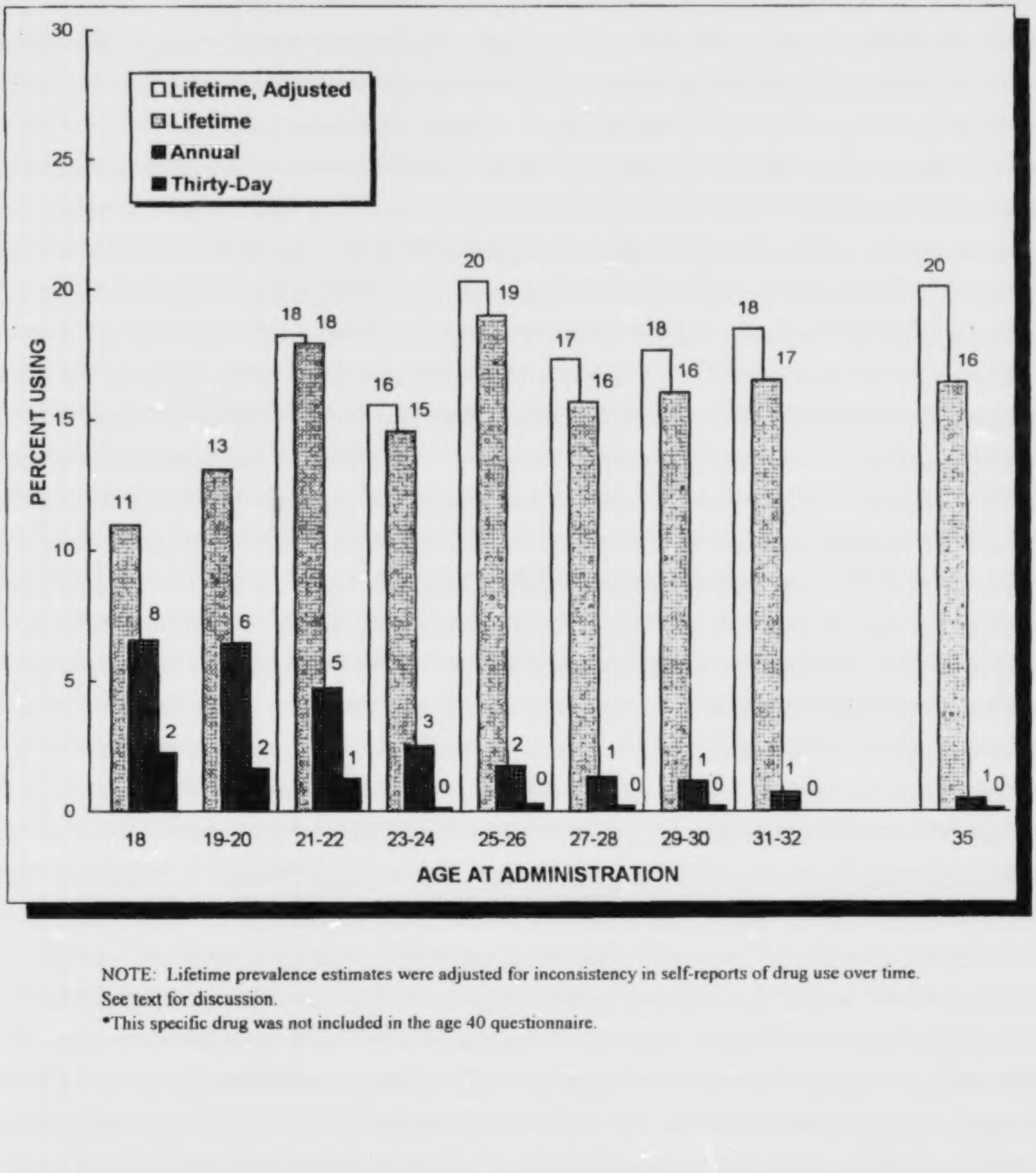
*Unadjusted for the possible underreporting of PCP.

NOTE: Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.

FIGURE 4-9

LSD: Lifetime, Annual, and Thirty-Day Prevalence Among High School Seniors and Adults Through Age 40*, 2001

by Age Group

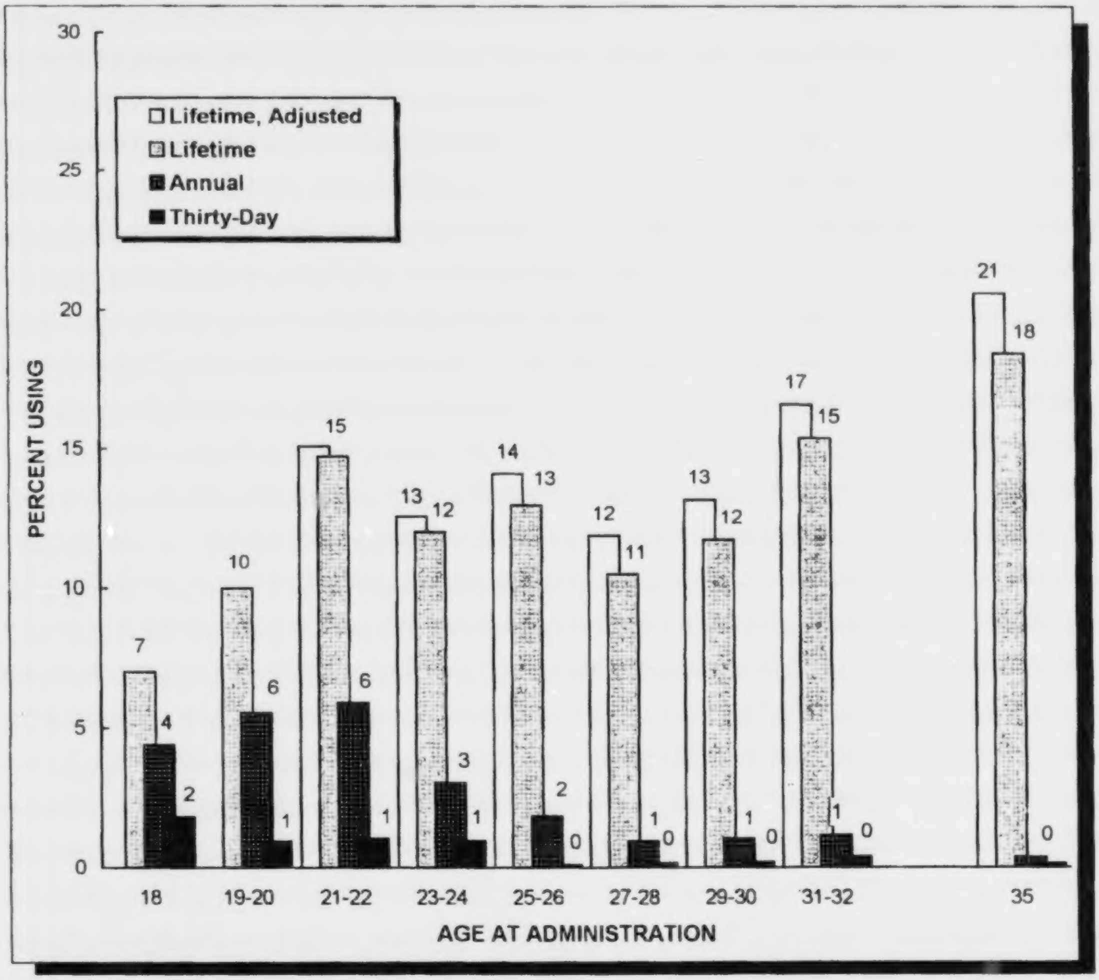


NOTE: Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.

*This specific drug was not included in the age 40 questionnaire.

FIGURE 4-10

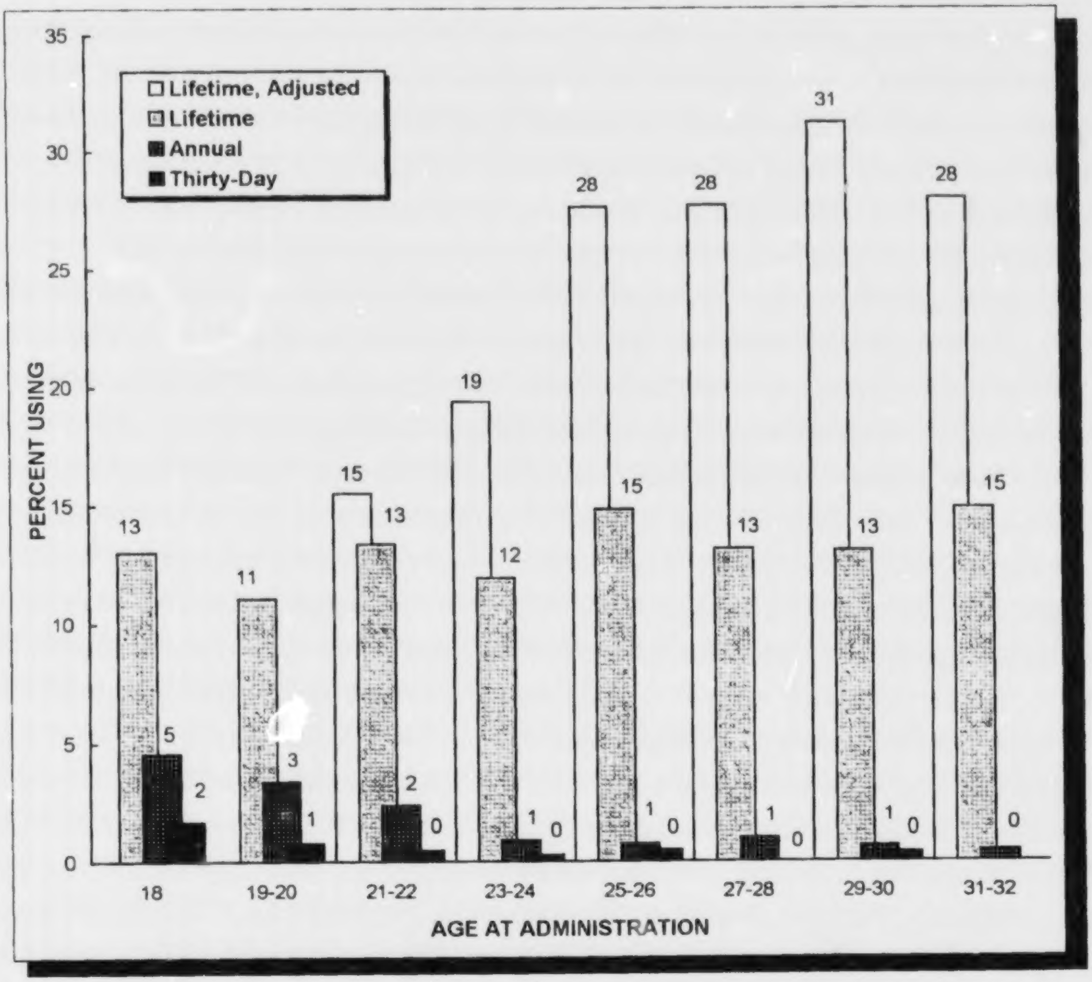
Hallucinogens Other than LSD: Lifetime, Annual, and Thirty-Day Prevalence Among High School Seniors and Adults Through Age 40*, 2001
by Age Group



NOTE: Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.
*This specific drug was not included in the age 40 questionnaire.

FIGURE 4-11

Inhalants: Lifetime, Annual, and Thirty-Day Prevalence Among High School Seniors and Adults Through Age 40*, 2001
by Age Group



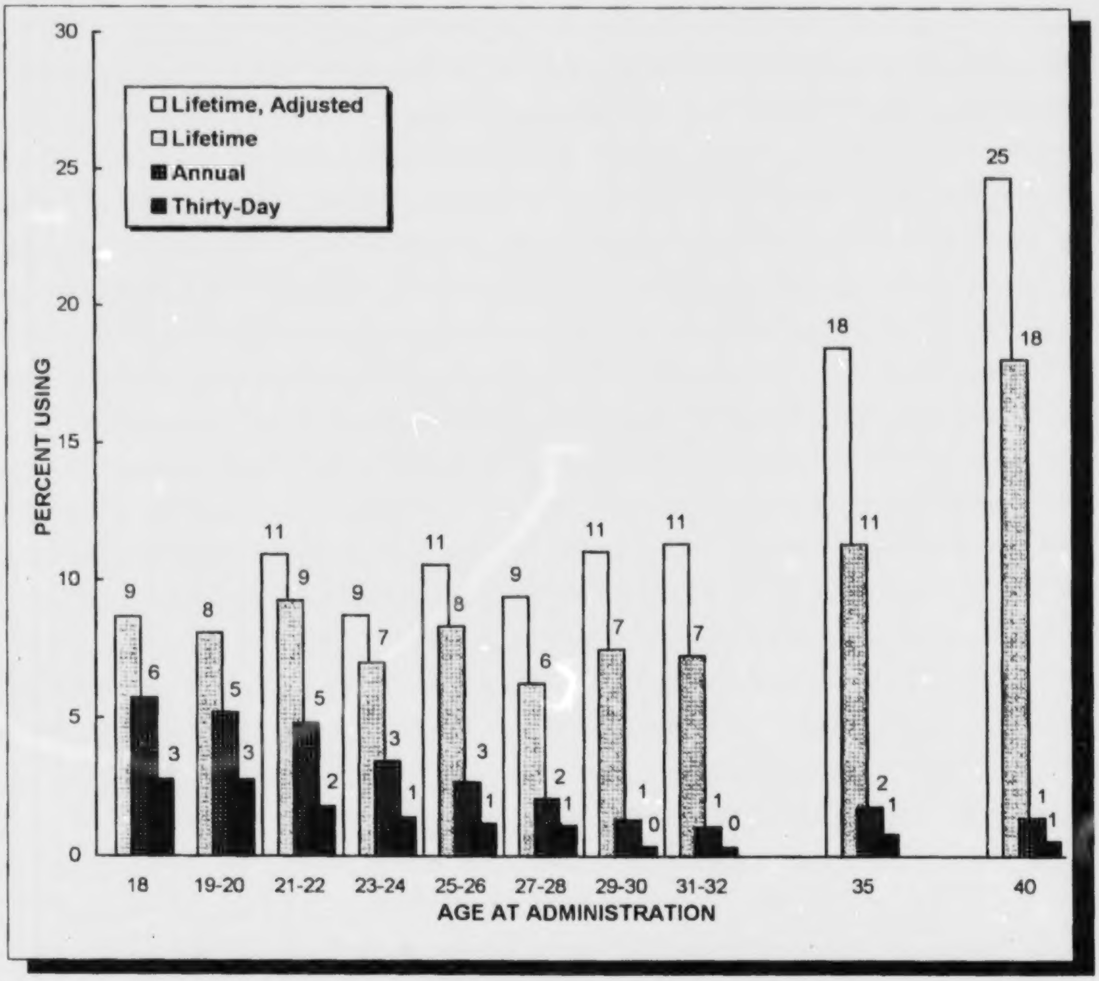
*Unadjusted for the possible underreporting of amyl and butyl nitrites. This speciic drug was not included in the age 35 or age 40 questionnaires.

NOTE: Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.

FIGURE 4-12

Barbiturates: Lifetime, Annual, and Thirty-Day Prevalence Among High School Seniors and Adults Through Age 40, 2001

by Age Group

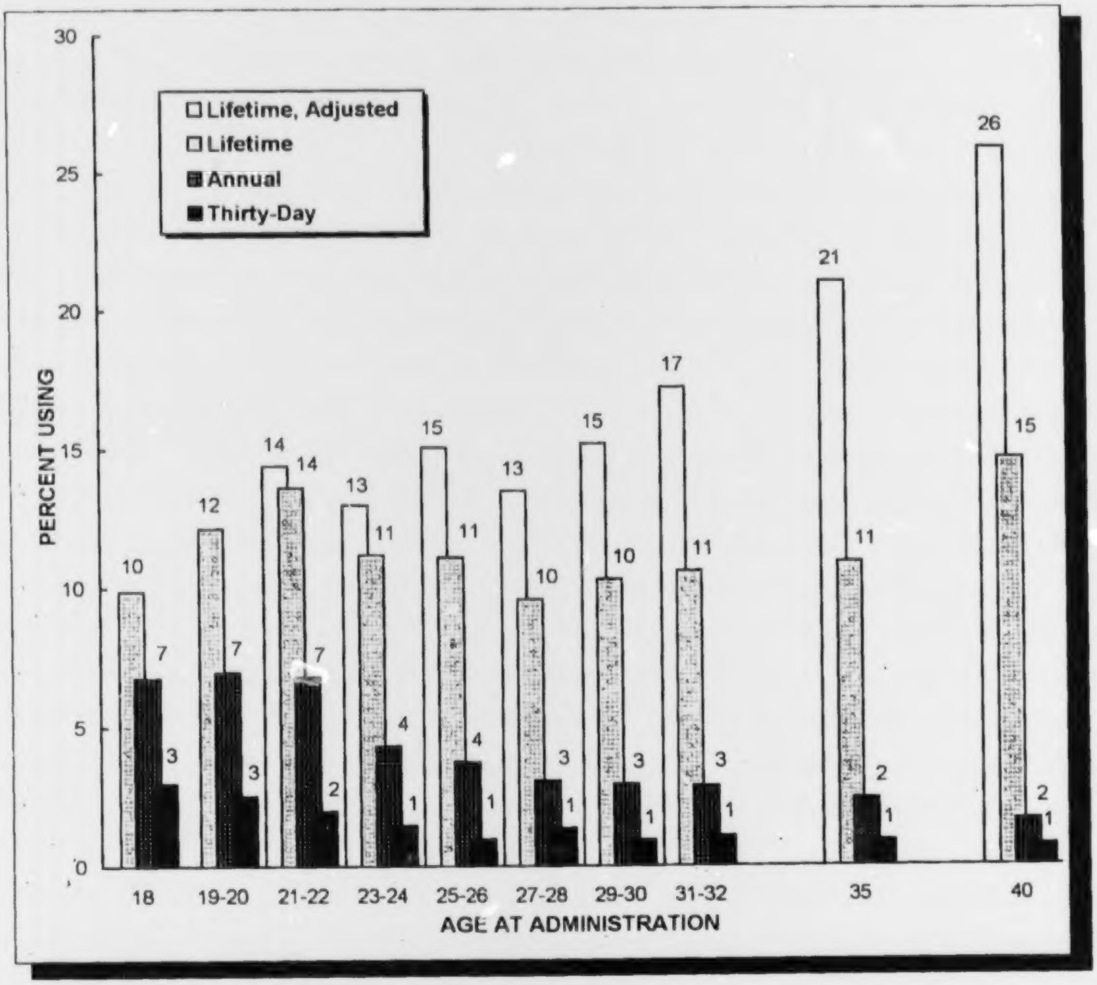


NOTE: Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.

FIGURE 4-13

Narcotics Other than Heroin: Lifetime, Annual, and Thirty-Day Prevalence Among High School Seniors and Adults Through Age 40, 2001

by Age Group

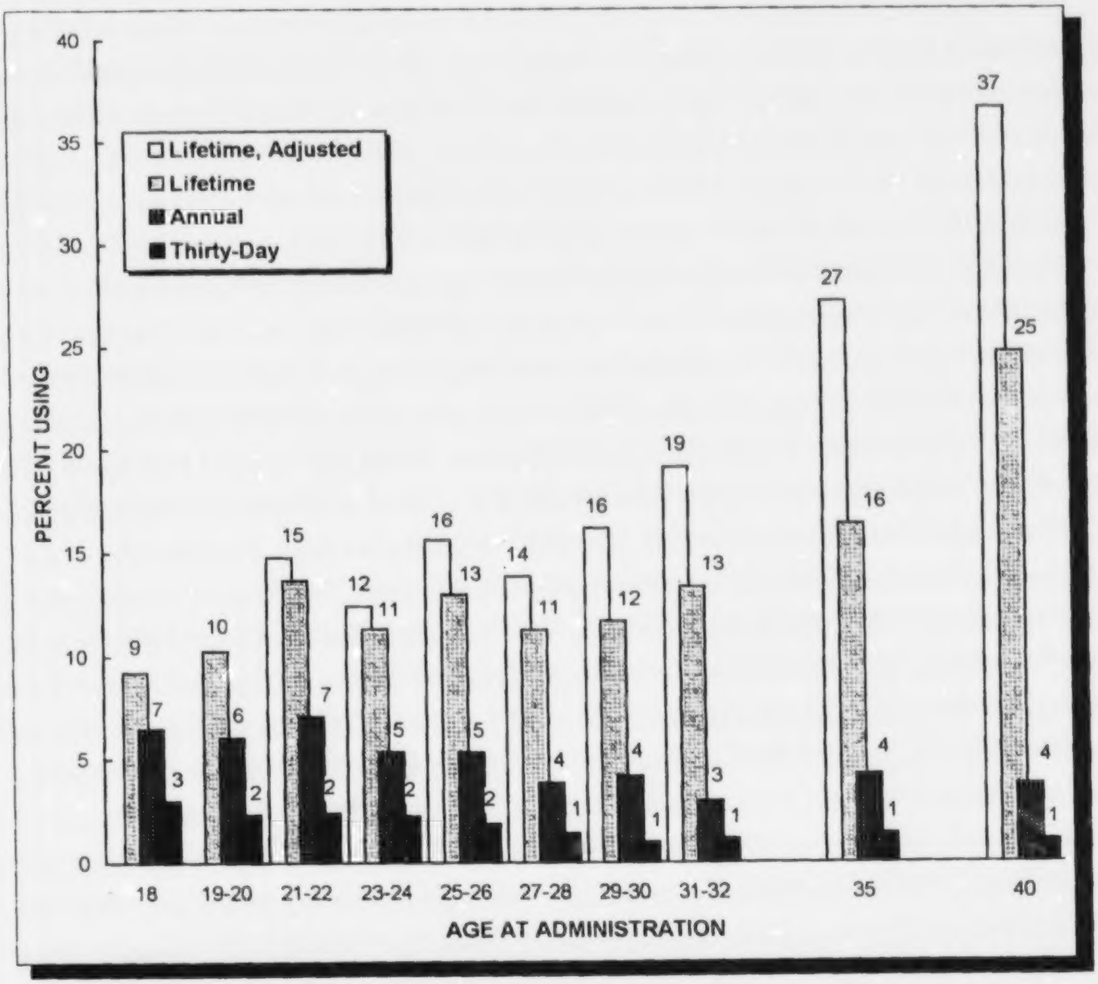


NOTE: Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.

FIGURE 4-14

Tranquilizers: Lifetime, Annual, and Thirty-Day Prevalence Among High School Seniors and Adults Through Age 40, 2001

by Age Group

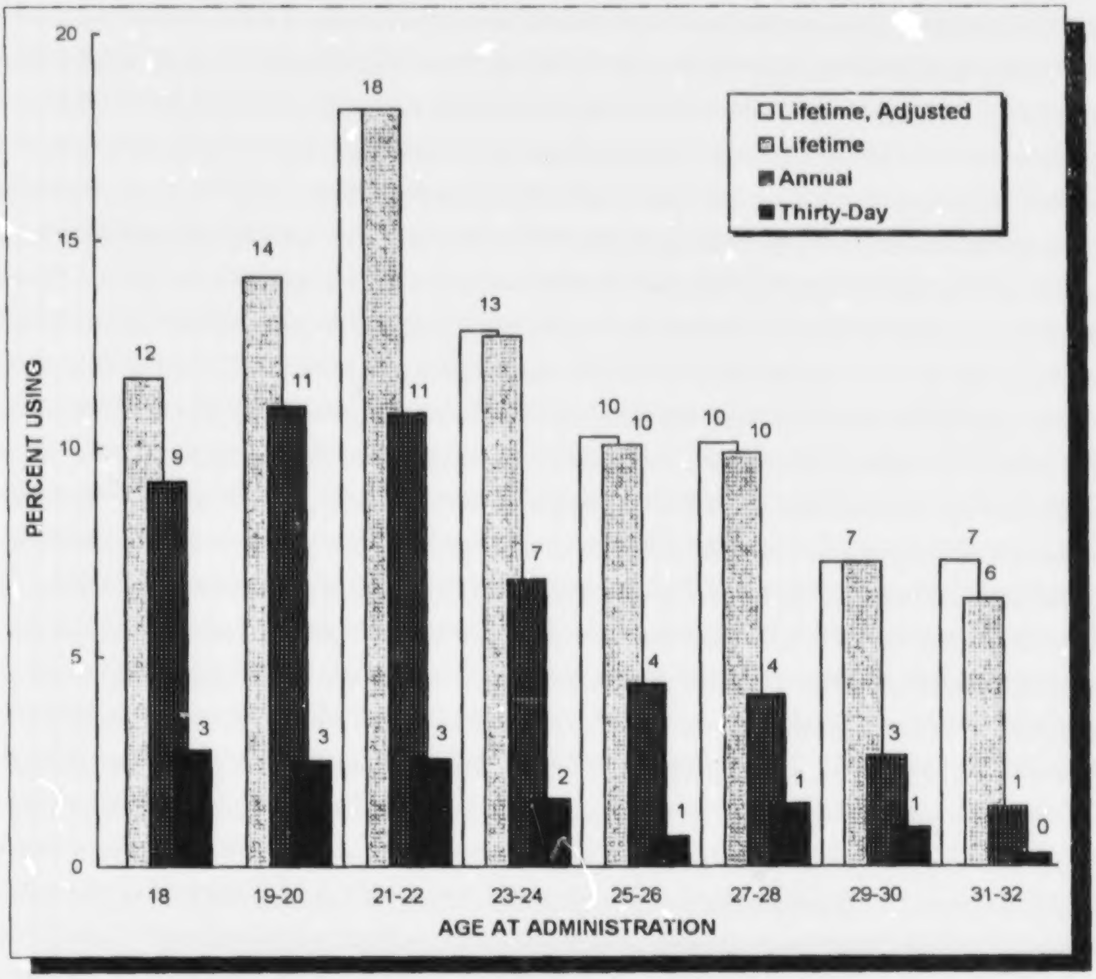


NOTE: Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.

FIGURE 4-15

MDMA: Lifetime, Annual, and Thirty-Day Prevalence Among High School Seniors and Adults Through Age 40*, 2001

by Age Group



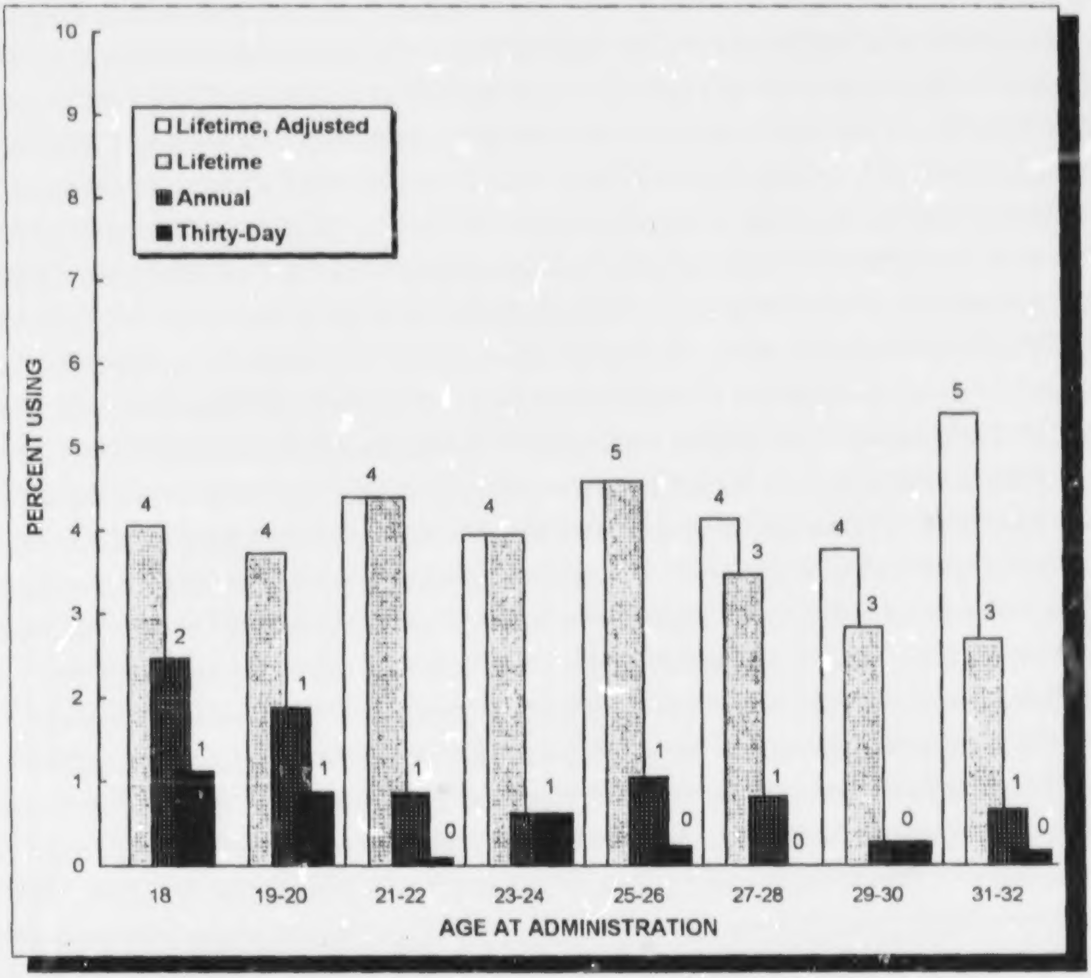
NOTE: Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.

*This specific drug was not included in the age 35 and age 40 questionnaires.

FIGURE 4-16

Crystal Methamphetamine ("Ice"): Lifetime, Annual, and Thirty-Day Prevalence Among High School Seniors and Adults Through Age 40*, 2001

by Age Group



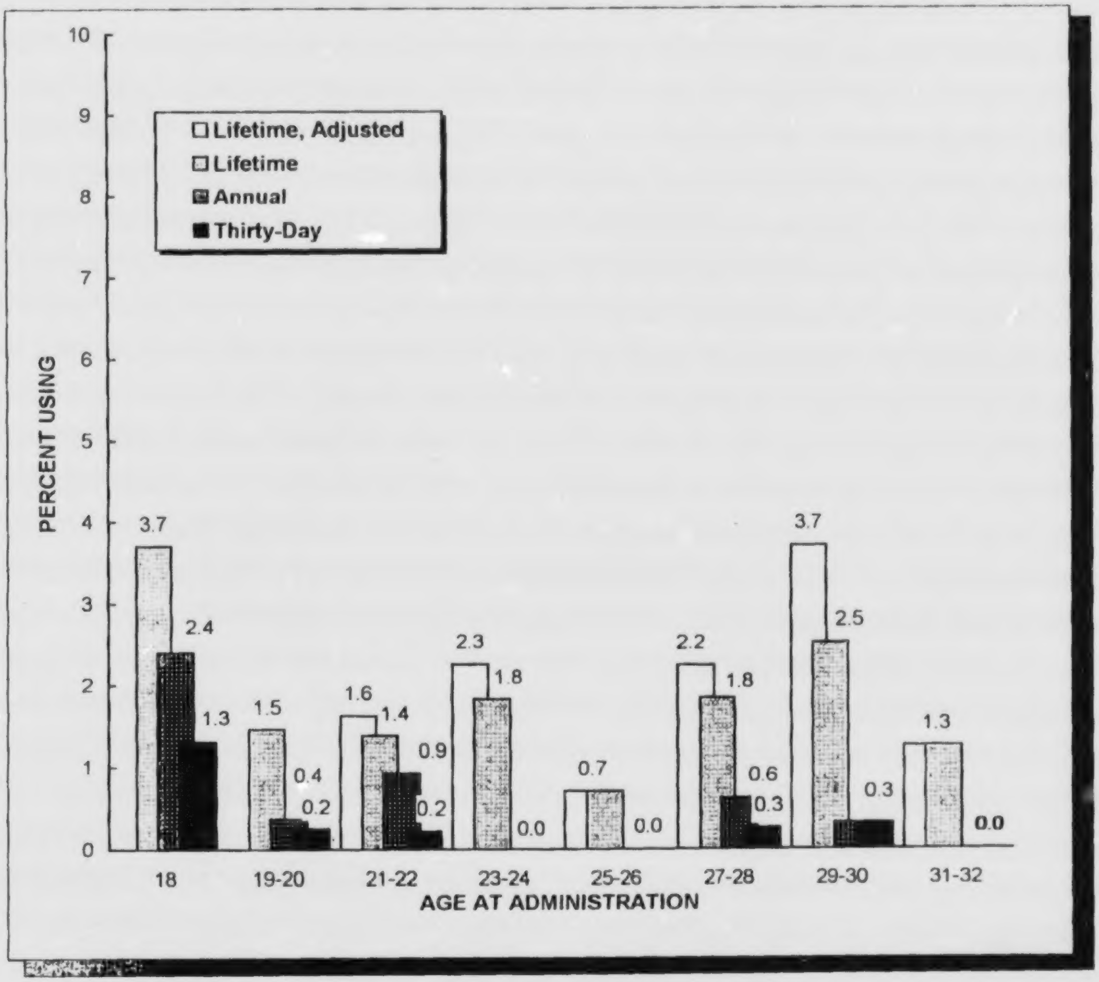
NOTE: Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for details.

*This specific drug was not included in the age 35 and age 40 questionnaires.

FIGURE 4-17

Steroids: Lifetime, Annual, and Thirty-Day Prevalence Among High School Seniors and Adults Through Age 40*, 2001

by Age Group



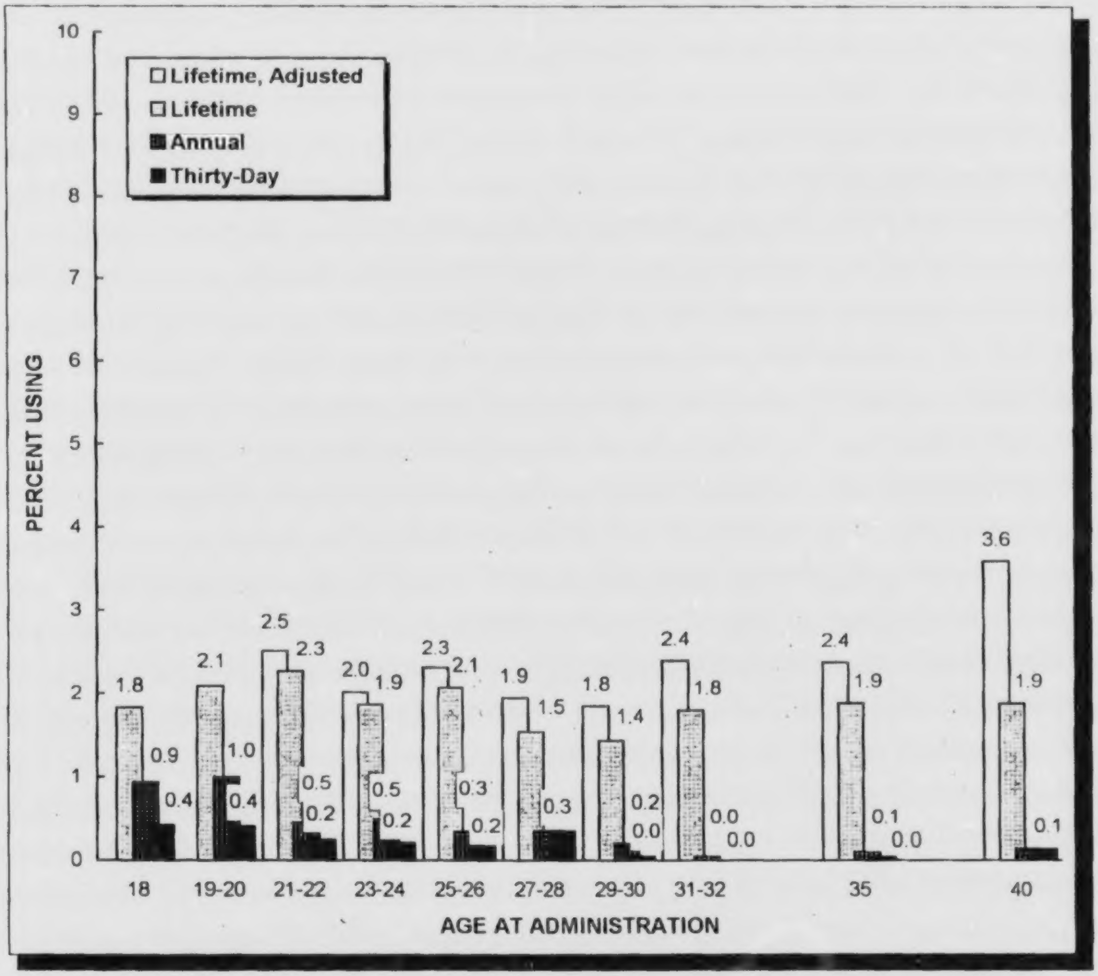
NOTE: Lifetime prevalence extimates were adjusted for inconsistency in self-reports of drug use over time. See text for details.

*This specific drug was not included in the age 35 and age 40 questionnaires.

FIGURE 4-18

Heroin: Lifetime, Annual, and Thirty-Day Prevalence Among High School Seniors and Adults Through Age 40, 2001

by Age Group

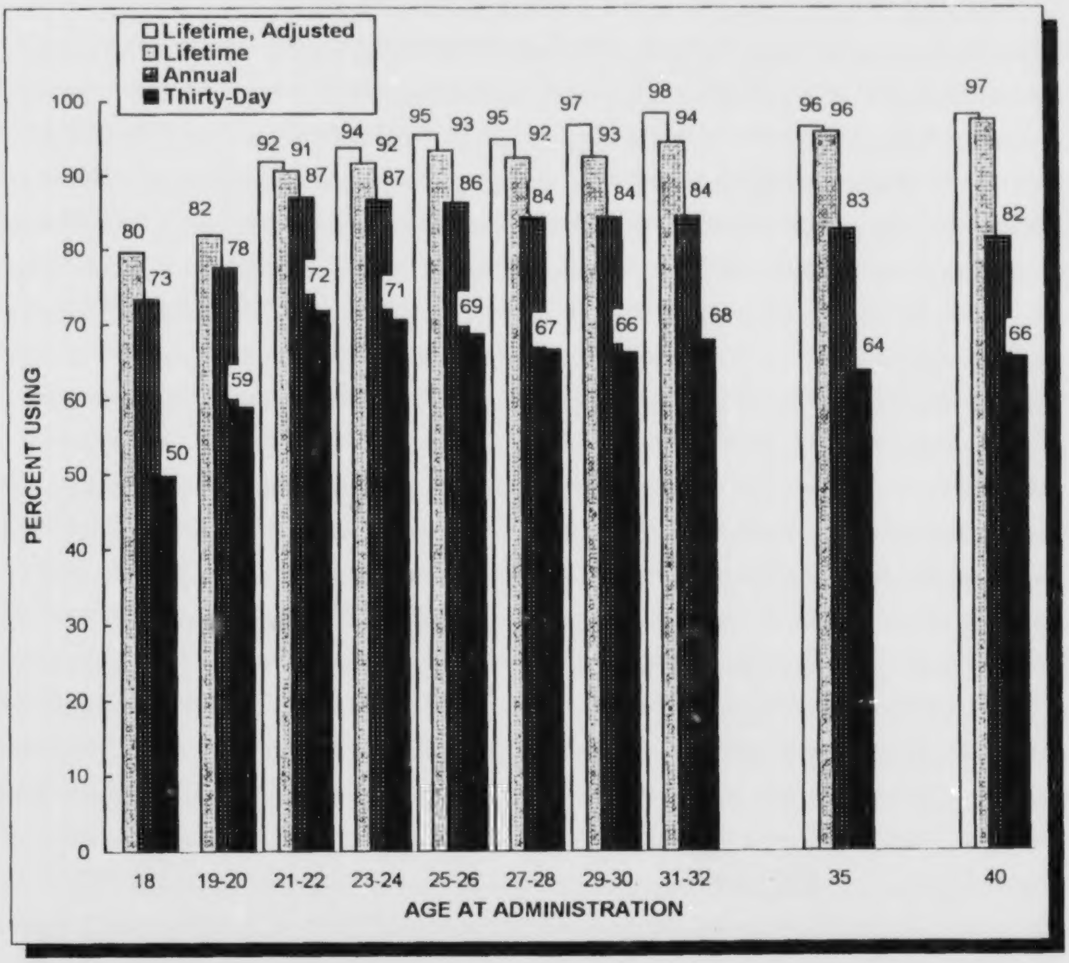


NOTE: Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.

FIGURE 4-19a

Alcohol: Lifetime, Annual, and Thirty-Day Prevalence Among High School Seniors and Adults Through Age 40, 2001

by Age Group



NOTE: Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.

FIGURE 4-19b

Alcohol: Two-Week Prevalence of Five or More Drinks in a Row and Thirty-Day Prevalence of Daily Use Among High School Seniors and Adults Through Age 40, 2001
by Age Group

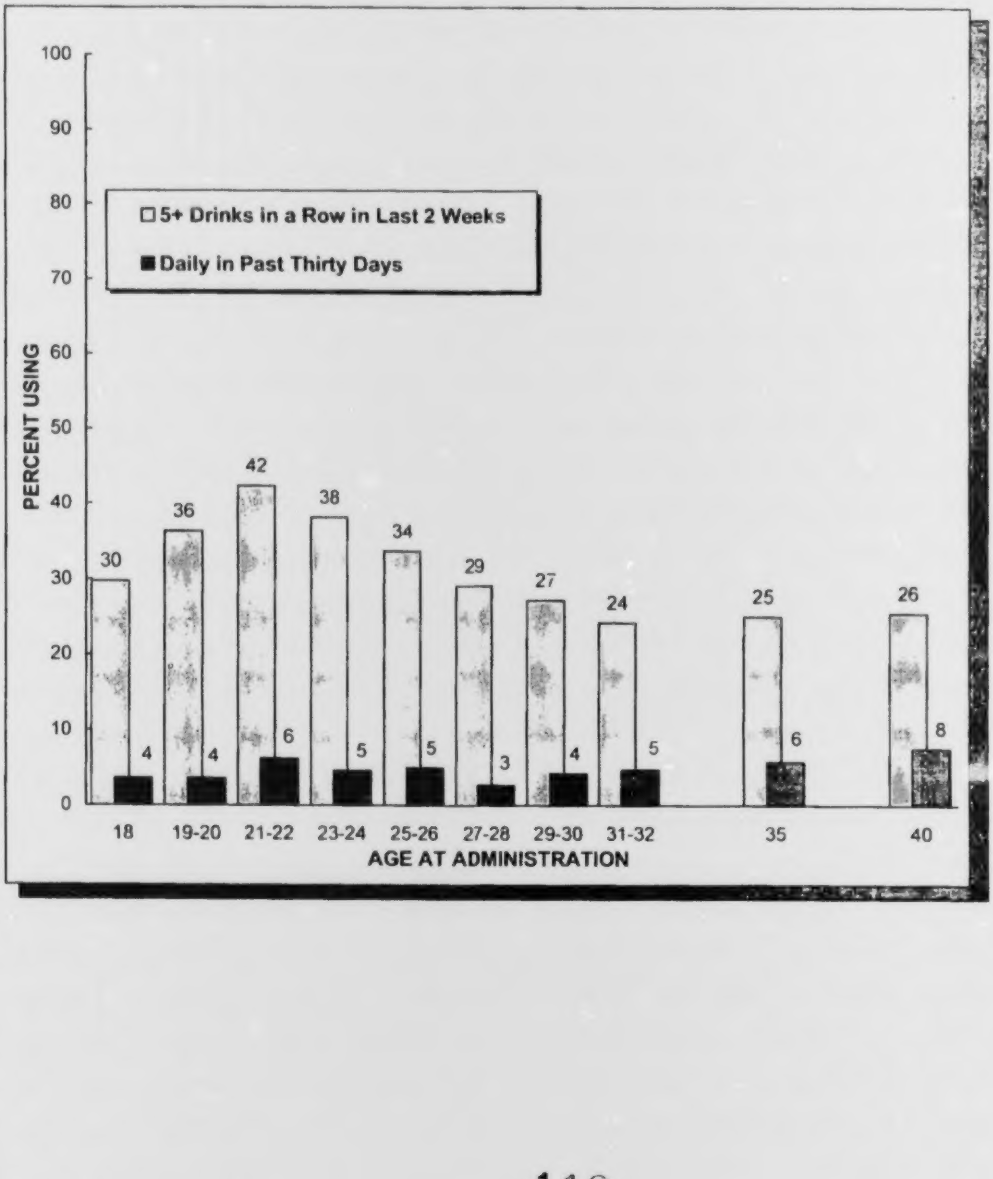
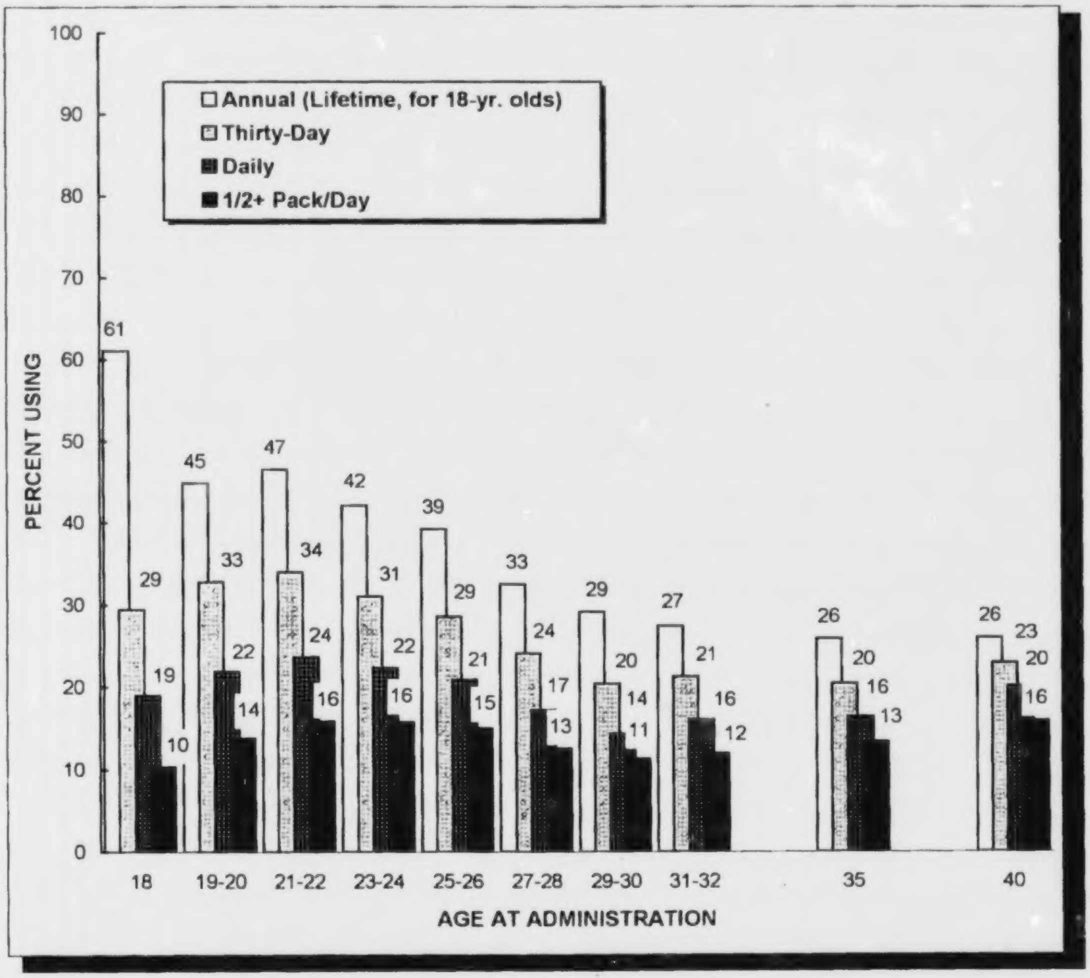


FIGURE 4-20

Cigarettes: Annual, Thirty-Day, Daily, and Half-Pack-a-Day Prevalence Among High School Seniors and Adults Through Age 40, 2001
by Age Group



Chapter 5

TRENDS IN DRUG USE IN EARLY TO MIDDLE ADULTHOOD

The traditional way in which panel data are used in longitudinal studies is to study changes in the behaviors and attitudes of individuals as they age over time. While the panel data we have gathered from the many high school graduating classes encompassed here can be, and frequently are, used for that purpose, they also can be used to track trends for fixed age-bands across years. In other words, they can be used much as we use the cross-sectional surveys of secondary school students. That is the way we have approached panel data in this chapter, similar to our method in the previous chapter: we track trends in use for particular age bands over time.

In the early 1990s, we began to document large and important increases among secondary school students in the use of a number of substances, particularly marijuana and cigarettes. The increases continued among high school seniors through 1997, as discussed in Volume I. An important issue addressed in this chapter is whether such increases have occurred only among adolescents, or whether recent graduating classes carry their higher levels of drug use in high school with them as they move into young adulthood. In other words, are they exhibiting lasting cohort effects?

Trends in the use of the various licit and illicit drugs by all high school graduates who are between 1 and 22 years beyond high school are presented in this chapter. Figures 5-1 through 5-19 plot separate trend lines for two-year age strata (that is, 1-2 years beyond high school, 3-4 years beyond high school, etc.) in order to damp down the random fluctuations that would be seen with one-year strata. (Strictly speaking, these two-year strata are not age strata, because they are based on all respondents that year from two adjacent high school classes, and they do not take account of the minor differences in individual respondents' ages within each class; however, they are close approximations to age strata, and we characterize them by the modal age of the respondents, as ages 19 to 20, 21 to 22, and so on.) Each data point in these figures is based on approximately 1,200 weighted cases drawn from two adjacent high school classes; actual (unweighted) numbers of cases are somewhat higher. For the 2001 data, the 19- to 20-year-old stratum is comprised of participating respondents from the classes of 2000 and 1999, respectively; the 21- to 22-year-old stratum contains data from the classes of 1998 and 1997, respectively, and so on. Figures 5-1 through 5-19 also present some recent trend data on age 35 and age 40 follow-ups. Each of these is constituted in a slightly different way, in that the two half-samples from a *single* graduating class (which until age 35 had been surveyed in alternating years) are both surveyed in the same year. In 2001, the 35-year-olds are graduates from the high school class of 1984 (n = 950) while the 40-year-olds are graduates from the high school class of 1979 (n = 1040).

Tables 5-1 through 5-5 are derived from the same data but are presented in tabular form for 19- to 28-year-olds combined (i.e., those who graduated from high school 1 to 10 years earlier). Data are given for each year in which they are available for that full age band (i.e., from 1986 onward).

Those aged 29 to 32 (and those aged 35 and 40) are omitted, because their inclusion would shorten the time period over which trends can be examined. However, the full data for them are contained in Figures 5-1 through 5-19.

TRENDS IN PREVALENCE: EARLY AND MIDDLE ADULTHOOD

Trends in use by young adults may be found in Tables 5-1 through 5-5 (for the age group 19-28, combined). Figures 5-1 through 5-19 also contain trend data for ages 19-32, broken into two-year age strata, and also contain data for ages 35 and 40 separately. The results are as follows:

- Longer term declines among young adults in the annual prevalence of a number of drugs appeared to end in 1992 (see Table 5-2). Among the 19- to 28-year-old young adult sample this was true for the use of ***any illicit drug***, ***any illicit drug other than marijuana***, ***marijuana***, ***hallucinogens***, ***narcotics other than heroin***, ***crack***, ***amphetamines***, ***barbiturates***, and ***tranquilizers***. In 1993 and 1994, annual prevalence for most drugs remained steady. ***Cocaine other than crack*** leveled in 1993 after a period of substantial decline. In 1995, there were modest increases (a percentage point or less) in the annual prevalence of almost all of the drug classes in Table 5-2, some of which were statistically significant.

  Thus, it is clear that by 1992 the downward secular trend observable in all of these age strata (as well as among adolescents) had ended.[26] (Such secular trends, in which different age groups move in parallel, are also called "period effects.") What has happened since 1992, however, is quite a different form of change. Rather than being a period effect common to all age groups, it is more of a "cohort effect," reflecting an interaction between age and period such that only adolescents showed the increase in illicit drug use initially, and then they carried those new levels of drug use with them as they entered older age bands. Figure 5-1 shows the effects due to generational replacement, as the teens of the early 1990s reached their twenties. It can be seen that, while all age groups moved fairly parallel through about 1992, the youngest age bands first showed sign of increase in their overall level of illicit drug use. The 18-year-olds shifted up first, followed by the 19- to 20-year-olds, the 21- to 22-year-olds, the 23- to 26-year-olds in 1999, and 27- to 30-year-olds in 2000. By 2000 and 2001, as the older groups were just beginning to increase, use among seniors and 19- to 20-year-olds began to decline.

  To repeat, in the earlier decline phase of the drug epidemic, annual prevalence of use of ***any illicit drug*** moved in parallel for all of the age strata, as illustrated in Figure 5-1; this pattern reflects a secular trend, because a similar change is observed simultaneously across different age levels. In what we have called the "relapse phase" after 1992, however, a quite different pattern emerged, with the seniors increasing their drug use first, and rising fastest; the next oldest age group following, but with a little delay; the next oldest then following, but with a longer delay; and the oldest groups not yet even showing an increase. This pattern reflects a classical cohort effect, in which different age groups are not all moving in parallel; rather, different age groups show increases when the cohorts (that is, different high school classes) having heavier use at an earlier stage in development reach the relevant age level. Further, the slopes of the age bands are successively less steep in the higher age groups, suggesting that some of the cohort effect may be dissipating with maturation. But, we think it unlikely that only cohort effects will be occurring (in addition to the long-established age effects); period effects are no doubt entering into the mix, as well.

---

[26] Actually, the downturn ended at least a year earlier among the youngest adolescents—the eighth graders—who showed the beginning of an increase in 1992. (See Table 2-2.)

- Use of ***marijuana***, which is the major component of the index of illicit drug use, shows an almost identical pattern (Figure 5-3a). After a long and steady decline from the late 1970s to the early 1990s, use leveled for a while among young adults, before beginning a gradual increase. Virtually all of this increase was attributable to the two youngest age bands (18 and 19 to 20) until 1996, when the third youngest age band (21- to 22-year-olds) began to show a rise. The fourth youngest age band showed some increase in 1999, the fifth and sixth youngest age bands in 2001, and in 2001 there is still no increase among the seventh youngest age band.

- A similar pattern emerged for current ***daily marijuana*** use (Figure 5-3c). In the mid- to late 1990s, daily marijuana use among the 35- and 40-year-olds has been as high as, or higher than, use among some younger age groups, suggesting a lasting cohort effect on this behavior. However, in recent years, the 35- and 40-year-olds have been similar to those 27 years of age and older at the lowest levels of daily use. An important finding shown in Figure 5-3b is that, although the various age groups had been moving in parallel for many years, the trends diverged very considerably in the 1990s.

- The index of using ***any illicit drug other than marijuana*** has shown a similar transition in the pattern of change. Period effects seemed to predominate until about 1992, but a cohort-related pattern of change emerged thereafter (Figure 5-2). And, while use leveled by 1997 among 18-year-olds, it began rising during that interval among 25- to 26-year-olds and is also now rising among 27- to 28-year-olds. The primary difference from the picture for marijuana is that the increases were not as sharp in the 1990s for most of the age bands for the other illicit drugs taken as a group.

- In the 1980s and 1990s, ***LSD*** use also increased among those in their teens and early twenties much more than among the older strata, as Figure 5-6 illustrates. Over the interval 1985 to 1996 there was a gradual but considerable increase in LSD use among those aged 18 to 24, which was sharpest among the seniors and the 19- to 20-year-olds. (In this case the increase did not seem to radiate up the age spectrum beyond age 26.) By the mid-1990s, use had leveled out in all age bands, with nearly all groups through age 26 showing some leveling or decline since 1996.

- Several of these drug classes actually exhibited a faster decline in use among the older age groups than among high school seniors during the earlier period of decline. (See Figures 5-1 through 5-19.) These included ***any illicit drug***, ***any illicit drug other than marijuana***, ***amphetamines***, ***hallucinogens*** (until 1987), ***LSD*** (through 1989), and ***methaqualone***.

- In fact there was a crossover for some drugs when seniors are compared to young adult graduates. In earlier years, seniors had lower usage levels but in recent years have higher ones than post-high school respondents for use of ***any illicit drug***, ***any illicit drug other than marijuana***, ***marijuana***, ***hallucinogens***, ***LSD*** specifically, ***tranquilizers***, and ***amphetamines***.

- ***Cocaine*** (Figure 5-9) gives a quite dramatic picture of change. Unlike most of the other drugs, active use of cocaine generally has tended to rise with age after high school, usually peaking approximately three to four years past graduation. Despite the large age differences in absolute prevalences among the different age strata, however, all of them moved fairly parallel through 1991. All began a sharp and sustained decline in use after 1986. The two youngest strata (seniors and 19- to 20-year-olds) leveled by 1992, whereas use continued a decelerating decline for a couple of years beyond that in the older age groups. From 1994 to 1999, cocaine use rose some in the five youngest strata (i.e., those younger than 27) on a somewhat staggered basis, with the three older groups still decreasing a bit more over that same period. This to some degree reversed the age differences that were so prominent in the 1970s and 1980s. Cohort-related change appears to have predominated in the 1990s, quite possibly as the result of "generational forgetting" of the cocaine-related casualties so evident in the early to mid-1980s. The fact that in recent years the 35- and 40-year-olds had higher levels of cocaine use than some of the younger age groups also suggests that there have been some lasting cohort-related differences in cocaine use.

- ***Crack*** use was added to the seniors' questionnaires in 1986 and to the follow-up questionnaires in 1987. The subsequent decline in crack use ended in 1991 among seniors, and by 1994 it had ended among young adults (see Figure 5-10 and Table 5-2). Among 19- to 28-year-olds, the annual prevalence rate has held at about 1%, which is down by nearly two-thirds from the peak levels of just over 3% in 1986 through 1988. As was true for a number of other drugs, crack use began to rise (in this case after 1993) among seniors, but not in the older age strata until 1999, when use rose significantly among 19- to 20-year-olds. In 2000 it increased among 21- to 22-year-olds, but here has yet to be an increase among the older groups. Again, a cohort effect due to generational replacement seems to have been occurring.

- With regard to ***inhalants***, the large separation of the age band lines in Figure 5-4 shows that, across many cohorts, use consistently has dropped sharply with age, particularly in the first few years after high school. In fact, of all of the populations covered in this study, the eighth graders (not shown in Figure 5-4) have had the highest rate of use, which indicates that the decline in use with age starts at least as early as eighth or ninth grade.

Figure 5-4 also shows that there was a long-term gradual increase in annual inhalant use (unadjusted for underreporting of nitrite inhalants) one which was greatest among seniors, next greatest among 19- to 20-year-olds, and next greatest among 21- to 22-year-olds. Respondents more than six years past high school, who historically have had a negligible rate of use, did not exhibit the increases in use seen among the younger respondents, beginning at least as early as 1977 among the seniors and in 1983 among the 19- to 20-year-olds. There was subsequently some increase among the 21- to 22-year-olds and later still an increase among 23- to 24-year-olds. After 1995, this long-term trend began to reverse, and use declined, particularly among the younger age strata. The older age strata generally have shown negligible rates of inhalant use.

- In the late 1970s, ***amphetamine*** use rose with age beyond high school; but after a long period of decline in use from 1981 to the early 1990s, this relationship had reversed (see Figure 5-13). The declines were sharpest in the older strata and least among the seniors, even though use decreased substantially in all groups. As was true for many of the illicit drugs, amphetamine use began to rise among the seniors after 1992, and eventually among the 19- to 24-year-olds; but there has only recently been a small increase among those 25 to 30 years old. In other words, another cohort-related pattern of change seems to have emerged in the 1990s for amphetamines, though in this case it may be dissipating quickly after the early twenties.

- The annual prevalence for ***MDMA (ecstasy)*** among the entire young adult sample (ages 19 to 28) was at about 1.5% in 1989 and 1990 (Table 5-2 and Figure 5-8). After 1991 it dropped to around 0.8% for several years, before starting to rise significantly in 1995 to 1.6%. After 1994, ecstasy use began to rise in all of the young adult age strata but clearly rose the most among those in the younger age bands (19 through 26) through 2000, although some decline began in 2001 among those at the older end of that range (23 through 26.) Use among seniors, which was not measured until 1996, was by then the highest of any of the age groups at 4.6% annual prevalence. Their use slipped by a full percentage point through 1998 before jumping significantly—by two full percentage points—in 1999. (Use by tenth graders also jumped significantly in 1999.) Thus it appears that young people from their mid-teens to mid-twenties had "discovered" ecstasy, after some years of low and level use. In 2000 the sharp increase in use continued among those aged 15 to 26 and also showed up among eighth graders (13- to 14-year-olds) for the first time. By 2001 the increase had slowed and even begun to reverse among those aged 18 to 26, even as the 31- to 32-year-olds showed their first appreciable increase in ecstasy use. Thus it appears that a cohort effect has emerged for this recently popular drug, as well.

- Since 1990, when it was first measured, the use of ***crystal methamphetamine (ice)*** has remained at fairly low rates in this young adult population (Figure 5-14).

However, among 19- to 28-year-olds combined, annual prevalence rose from 0.4% in 1992 to 1.2% by 1995 before leveling at around 1% through 2001 (Table 5-2).

- Use of ***heroin*** increased appreciably in 1995 among both seniors and young adults aged 19 to 24 but not among the older age bands (Figure 5-11 and Table 5-2). Among young adults generally, annual use had previously been quite stable at least as far back as 1986 (Table 5-2), and it stabilized again at a higher level after 1995.

- Among 19- to 28-year-olds, the use of ***narcotics other than heroin*** leveled after 1991, following a period of slow, long-term decline (Figure 5-12). Seniors showed an increase, beginning in 1993, which continued into 2000, while 19- to 20-year-olds showed some increase after 1994, 21- to 22-year-olds after 1996, 23- to 24-year-olds after 1997, and the older age groups after 2000. Thus, cohort-related change appears to have been occurring during the 1990s for this class of drugs as well, following a long period of secular trends.

- ***Barbiturate*** use (Figure 5-15) has shown a similar pattern to that seen for narcotics other than heroin. They had shown a long-term parallel decline in all age groups covered through the late 1970s and 1980s, leveling by about 1988. While use has remained low and quite level for most of the age bands, use began to rise by 1993 among seniors, by 1995 among 19- to 20-year-olds, by 1997 among 21- to 22-year-olds, by 1998 among 23- to 24-year-olds, and by 2001 among 25- to 28-year olds. The same cohort-related pattern of change during the 1990s seen for many other drugs exists for barbiturates also.

- ***Tranquilizers*** (Figure 5-16) give a fairly similar picture to that just described for barbiturates. The major difference is that the seniors' annual prevalence rate has not always been the highest among the various age groups, as was the case for barbiturates, although it was highest between 1994 and 2000 as a result of the greater increase in tranquilizer use among the seniors. In 2001, however, as use continues to increase among those in their early twenties, the seniors no longer stand out as having the highest rate of tranquilizer use.

- The use of ***anabolic steroids*** (Figure 5-17) is substantially lower after high school than during, and this has been true since measures of steroid use were first introduced into two of the follow-up questionnaires in 1991. Because the estimates in the follow-up study are based on relatively low numbers of cases, the age-related differences are not consistent. What is consistent is that they are all quite low and do not appear to trend in any systematic way. In general, it seems that the rise in steroid use in 1999 among eighth and tenth graders, in 2000 among tenth graders, and in 2001 among twelfth graders seems to have been specific to those age groups, at least so far.

- The ***alcohol*** trends for the older age groups (see Figures 5-18a-d) also have been somewhat different than for the younger age groups, and in some interesting ways. For ***30-day prevalence*** and ***occasions of heavy drinking***, the declines for the two youngest age strata (seniors and those one to two years past high school) during the 1980s were greater than for the older age groups. These differential trends are due in part to the effects of changes in minimum drinking age laws in many states, changes that would be expected to affect primarily the age groups under age 21. However, because similar (though weaker) trends were evident among high school seniors in states that maintained a constant minimum drinking age of 21, the changed laws cannot account for all the downward trends, suggesting that there was also a more general downward trend in alcohol consumption during the 1980s.[27] By 1994, these declines in 30-day prevalence had slowed or discontinued for virtually all age groups.

Those respondents 3 to 4 years past high school stand out for showing the smallest downward trend in ***binge drinking*** since the early 1980s (see Figure 5-18d). One important segment of that age stratum is comprised of college students, who showed very little downward trend (see Chapter 9).

The older age groups, in general, have shown only a modest long-term decline in annual prevalence rates and no recent decline in binge drinking or in 30-day prevalence rates. Note that the binge drinking trend lines for different age groups (Figure 5-18d) are spread out on the vertical dimension reflecting large and persisting age differentials (age effects) in this behavior. In recent years the 21- to 22-year-olds have shown the highest rates of binge drinking, while the two adjacent age bands have shown the next highest.

Rates of ***daily drinking*** (Figure 5-18c) fell by considerable amounts in all age strata, reflecting an important change in drinking patterns in the culture. Among 19- to 28-year-olds combined, daily drinking fell from 6.6% in 1987 to 3.9% in 1994, before leveling. In 2001, daily drinking stood at 4.4% (see Table 5-4).

As shown in Figure 5-18b, there was a gradual decline in 30-day prevalence of ***alcohol*** use among seniors between 1980 (72%) and 1987 (66%) followed by a sharper drop between 1987 and 1992 to 51%, approximately where it has remained since. Among those one to two years past high school there was a gradual decline from 1981 (77%) to 1989 (70%), followed by a sharper decline through 1996 (58%) and a little increase since. The declines may reflect some lagged and lasting effects resulting, at least in part, from the change in drinking age laws.

It is worth noting that the 35- and 40-year-olds have had among the lowest rates of binge drinking but among the highest rates of daily drinking in the few recent years for which we have data available. These patterns—particularly the high rate of daily drinking—may reflect age effects and/or some enduring cohort differences (since these cohorts had considerably higher rates of daily drinking when they were in high school).

---

[27] O'Malley, P. M., & Wagenaar, A. C. (1991). Minimum drinking age laws on alcohol use, related behaviors, and traffic crash involvement among American youth: 1976-1987. *Journal of Studies on Alcohol, 52*, 478-491.

- The prevalence rates for ***cigarette smoking*** show more complex trends than most other substances, due to the long-term presence of both cohort and age effects, plus slightly different patterns of such effects on different measures of smoking in the past 30 days (one or more cigarettes per month, one or more cigarettes per day, and half-pack or more cigarettes per day).

  While in the earlier years of the study the curves are of the same general shape for each age band (Figures 5-19a-c), each of those curves tended to be displaced to the right of the immediately preceding age group, which is two years younger. The pattern is clearest in Figure 5-19c (half-pack plus per day). This pattern is very similar to the one described in Volume I for lifetime smoking rates for various grade levels *below* senior year; it is the classic pattern exhibited by a cohort effect—that is, when cohorts (in this case, high school graduating class cohorts) differ from other cohorts in a consistent way across much or all of the life span. We interpret the cigarette data as reflecting just such a cohort effect,[28] and we believe that the persisting cohort differences are due to the dependence-producing characteristics of cigarette smoking.

  The declining levels of cigarette smoking across cohorts at age 18, which were observed when the classes of 1978 through 1981 became high school seniors, were later observable in the early-30s age band, as those same high school graduating classes reached their early 30s (see Figures 5-19b and c). This was true at least through about 1991. After that, there was a considerable convergence of rates across age groups, largely because of few cohort differences among senior class cohorts who graduated from the early to mid-1980s through the early 1990s.

  In addition to these cohort differences, there are somewhat different age trends in which, as respondents grow older, the proportion smoking at all in the past 30 days declines some, while the proportion smoking a half-pack per day actually increases. Put another way, many of the light smokers in high school either become heavy smokers or quit smoking.[29]

  The picture was further complicated in the 1990s, when it appears that a new cohort effect emerged, with smoking among adolescents first rising sharply (beginning after 1991 for the eighth and tenth graders and after 1992 for the twelfth graders). The 19- to 20-year-olds also showed a rise at the beginning of the 1990s—responding perhaps to some of the same social forces as the adolescents (including possibly the Joe Camel advertising campaign); but the 21- to 24-year-olds did not show an increase until about 1995, and the 25- to 26-year-olds until about 1996. Those young adults over age 26 have not yet shown an increase, though they may well do so as the heavier smoking senior class cohorts enter those age bands.

---

[28] O'Malley, P. M., Bachman, J. G., & Johnston, L. D. (1988). Period, age, and cohort effects on substance use among young Americans: A decade of change, 1976-1986. *American Journal of Public Health, 78,* 1315-1321.

[29] To illustrate, in the class of 1976, 39% were 30-day smokers in senior year, 39% at ages 19 to 20, and by age 31 to 32 only 28%—a net drop of 11 percentage points over the entire interval. By way of contrast, 19% of that class were half-pack-a-day smokers in senior year, 24% by ages 19 to 20, and 21% at ages 31 to 32—a net gain of 2% over the interval.

After about 1999, smoking rates among virtually all age groups leveled or declined, suggesting that general societal forces may be affecting all age groups in a similar way, giving rise to some secular trends. Increases in price and a great deal of adverse publicity for the tobacco industry would be highly plausible candidates for such forces.

- Apart from cigarettes, none of the other drugs included in the study showed a clear long-term pattern of enduring cohort differences in the earlier years of the study (the 1970s and 1980s), despite wide variations in their use by different cohorts at a given age. There was one exception; a modest cohort effect was observable for ***daily marijuana*** use during the late 1970s and early 1980s. (But as more recent classes leveled at low rates of use, evidence for the cohort effect faded.) The emergence in the 1990s of a new epidemic of marijuana use and daily marijuana use among teens once again yielded a strong pattern of cohort effects. As can be seen in Figure 5-3c, use rose sharply among seniors and 19- to 20-year-olds after 1992, among 21- to 22-year-olds after 1993 with a sharp rise occurring in 1997, among the 23- to 24-year-olds after 1998, and among the 25- to 26-year olds after 2000. However, among those 27 and older there as yet has been virtually no increase in daily use. This is not so very different from the pattern of change for cigarette smoking that occurred in the 1990s (Figure 5-19a). The fact that there exists a cohort effect for daily marijuana use may be attributable, in part, to the very strong association between that behavior and regular cigarette smoking. It is noteworthy that even among the 35- and 40-year-olds in the study, fully 2.3% and 1.8%, respectively, report that they still currently smoke marijuana on a daily basis. That amounts to one in every fifty adults at those ages.

- In sum, except for ***cigarettes*** and ***alcohol,*** prior to 1992 substance use among high school seniors and young adults had shown *longer-term* trends that were highly parallel. Although divergent trends would not necessarily demonstrate a lack of validity in either set of data (because such a divergence could occur as the result of cohort differences), we took the high degree of *convergence* for many years as evidence of validity in the trends reported earlier for the seniors. In fact, each of these sets of data has helped to validate the trend story reported by the other.

  Since 1992, however, there has been some considerable divergence in the trends for different age bands on a number of drugs as use among adolescents rose sharply, followed by subsequent rises among the 19- to 20-year-olds, the 21- to 22-year-olds, and so on. This divergence indicates a new cohort effect, quite possibly reflecting a "generational forgetting" of the dangers of drugs by the cohorts who reached senior year in the early to mid-1990s. The data discussed in Chapter 6, "Attitudes and Beliefs About Drugs Among Young Adults," provide additional evidence for this interpretation.

TRENDS FOR IMPORTANT SUBGROUPS OF YOUNG ADULTS

Four-year age bands have been used here to examine subgroup trends in order to yield sufficiently large numbers of cases to permit reliable estimates for the various subgroups being examined. Subgroup data for respondents of each gender, and for respondents from communities of different sizes, are available for 19- to 22-year-olds since 1980, 23- to 26-year-olds since 1984, and 27- to 30-year-olds since 1988. Beginning with the 1987 follow-up questionnaires, information on state of residence was included, permitting us to obtain trend data for the four regions of the country since 1987. These various subgroup data are not presented in tables or figures here because of the substantial amount of space they would require. Rather, a verbal synopsis of what they contain is presented here.

Gender Differences in Trends

- Over the long term, gender differences narrowed for some drugs among young adults, primarily because of a steeper decline in use among males (who generally had higher rates of use) than among females. The overall picture, though, is one of parallel trends, with use among males remaining higher for most drugs, including the indexes of ***any illicit drug*** use in the prior year and use of ***any illicit drug other than marijuana*** (see Table 5-5, for example).

- The downward trend in ***marijuana*** use among 19- to 22-year-olds between 1980 and 1989 was somewhat sharper among males than females, narrowing the gap between the two groups. Annual prevalence fell by 22 percentage points (to 34%) among males, compared to a drop of 14 percentage points (to 31%) among females. Since then, the gap widened a bit, as use has begun to rise modestly in this age band (but not much yet in the older ones) since 1993.

  Similarly, between 1980 and 1993 ***daily marijuana*** use for this age group fell more steeply, from 13% to 3% among males, versus from 6% to 2% among females, narrowing the gap considerably. As use began to rise after 1993, the gap widened again. Among 23- to 26-year-olds, as daily use first began to increase in 1998 and 1999, the gap between the genders began to widen, but movement since then has mostly been in parallel. In the oldest age group (aged 27-30), the difference has been fairly constant, with daily marijuana use among males being two to three times higher than among females.

- Males have shown slightly higher proportions using ***any illicit drug other than marijuana*** in all three age bands, a fact that has not changed appreciably over the years, though the differences tended to narrow some as use dropped and to return as use increased.

- For ***LSD***, males have consistently had higher rates of use than females. Among 19- to 22-year-olds, the male-female differences tended to diminish as use declined (1980-1985) and tended to increase as use increased (1985-1995). In the two older age bands, there has been less change in use, and differences have been relatively consistent. Among 23- to 26-year-olds in 2001, 3.4% of the males report LSD use in the prior year versus 1.2% of the females.

- Questions about the use of ***MDMA (ecstasy)*** were added to the study in 1990. In the beginning of the 1990s, rates of use were quite low in all three age bands and use among males tended to be higher. The gender difference narrowed in the older two age bands in the early 1990s but not among the 19- to 22-year-olds. Ecstasy use increased in all three age bands, though in a staggered fashion. Among the 19- to 22-year-olds, there was a sharp increase from 1993 through 2000. Among 23- to 26-year-olds, use increased from 1997 through 2000 and among the 27- to 30-year-olds in 1999 and 2000. In general, the gender differences have widened as use has increased; but use in the two younger age bands has been increasing sharply among females as well as among males.

- During the period of sharp decline from the peak levels in annual ***cocaine*** prevalence (1986-1993), use dropped more among males than females, narrowing the gender differences. In the 19- to 22-year-old age band, annual prevalence for males declined by 16 percentage points (to 4.5%) versus 13 percentage points among females (to 2.8% in 1993). In the 23- to 26-year-old age band there was also a narrowing of the gender difference between 1986 and 1993, with annual prevalence down 19 percentage points (to 6.9%) among males and 13 percentage points (to 4.2%) among females. Since 1988, when data are first available for them, use in the 27- to 30-year-old group also dropped faster among males (down 13.3 percentage points versus 7.1 among females) between 1988 and 1997. In sum, during the period of sharp decline in cocaine use overall, the gender differences—which had been fairly large—narrowed considerably in all three of these age bands. A similar occurrence happened with ***crack***, though the proportional difference between the two genders has consistently been higher than for cocaine overall.

- As ***barbiturate*** use declined through the 1980s, the modest gender differences (males were higher) were virtually eliminated in all three age bands; annual prevalence stands between 1.4% and 5.7% for both genders in all three age groups in 2001. Since the early 1990s, there has been a modest increase for both genders among the 19- to 22-year-olds, with males being the first to rise (as is often the case), followed by the females. Among the 23- to 26-year-olds, use began to rise among males since 1997, with the females catching up in 2000.

- The annual prevalence figures for ***heroin*** dropped among males in the 19- to 22-year-old category between 1980 and 1986 (from 0.6% to 0.2%) before leveling through 1994; thus most of the decline in use in that interval was among males. Rates for both sexes remained very low, between 0.1% and 0.3% throughout the period 1986 through 1994. In 1995 through 1998, use increased appreciably among both males and females in this youngest age group, but a gender difference opened up again (with males higher). In 2001 their respective annual prevalence rates were 0.9% and 0.7%. Among 23- to 26-year-olds, use also remained low (0.1% to 0.2%)

over the years 1986-1994 for both genders. There was an increase in 1995 in both genders, followed by two years of falloff, but since 1994, use has risen primarily among males and more of a gender difference has emerged (again, males are higher, 0.8% versus 0.1% in 2001). Among 27- to 30-year-olds there was some falloff in ***heroin*** use between 1988 (when data were first available) and 1990 in both genders, and a narrowing of gender differences. Use rose slightly in the mid-1990s among males, and the rates among males have recently been higher than among females.

- Among 19- to 22-year-olds, both genders showed some decline in their use of ***narcotics other than heroin*** between 1980 and 1991, with a near elimination of previous gender differences (males had been higher). Beginning in 1994, use by males began to rise in this age band, while use by females began to rise a year later. The increase has continued through 2001 (as has been true among high school seniors, as well), and the gender difference has reemerged, with an annual prevalence in 2001 of 8.4% for males versus 5.8% for females. The largest changes have occurred in the 19- to 22-year-old band. Among 23- to 26-year-olds, the gender difference (males higher) had been eliminated by 1988. It began to reemerge after 1992 as use has increased more among males. Among the 27- to 30-year-olds, there has been a smaller gender difference and the least increase in use in the 1990s.

- Between 1981 and 1991, rates of ***amphetamine*** use were similar for males and females and showed substantial and parallel downward trends for both genders. Among the 19- to 22-year-olds, use for males dropped 22 percentage points in annual prevalence (to 5.2% in 1991), and use for females dropped 21 percentage points (to 4.7% in 1991). Since 1991, there have been small increases in annual prevalence for both genders in the 19- to 22-year-age group, in which the prevalence rate now stands at 9.2% for males and 7.7% for females. However, there has been no upturn in the older age bands for either gender, and generally there has not been any appreciable gender difference in ***amphetamine*** use for some years in any of these three age bands.

- ***Crystal methamphetamine*** (***ice***) was added to the study in 1990. In the early 1990s use was low and very similar for both genders in all three young adult age bands. Nearly all of the increase in use that occurred in the mid-1990s in the younger two age bands occurred among males—opening a gender gap. The genders converged again by 1998 or 1999, however.

- For ***tranquilizers***, both genders showed a long, gradual decline (and very similar rates of use) from 1980 through about 1993 in all three age bands. Beginning in 1995, use increased for both genders in the 19- to 22-year-old group, followed by some increase in 1998 among the 23- to 26-year-olds, again reflecting generational replacement. Some gender difference has emerged in this period of increase, with males reporting higher usage rates.

- ***Inhalant*** use has been consistently higher among males than females in all three age groups. The 19- to 22-year-old group showed a gradual upward shift from 1980 to

124A

1988, followed by a leveling for some years, in both genders. In 1996, however, the gender gap diminished as use among females jumped to a higher plateau. Since 1996 there has been some upward shift among males and some decline among females, reestablishing a gender gap of about 2 to 1. Among 23- to 26-year-olds, there was a widening gender gap as use by males, but not females, increased between 1992 and 1999.

- For ***alcohol,*** 30-day prevalence rates have shown a long, gradual, parallel decline from 1981 through 1992 for both genders in the 19- to 22-year-old age group. Thirty-day prevalence fell from 83% to 72% among males and from 75% to 62% among females by 1992. In the two older age bands, there had also been a modest, parallel decline for both genders, from 1985 through 1992 in the case of 23- to 26-year-olds, and at least from 1988 (when data were first available) to 1991 or 1992 in the case of the 27- to 30-year-olds. Since 1992, both genders in all three age bands have shown level use, with males somewhat higher.

  There also was a general long-term decline in ***daily drinking*** from about 1981 or 1982 through about 1992, with daily use falling more among males, considerably reducing, but far from eliminating, what had been a large gender difference among 19- to 22-year-olds. To illustrate, in 1981, 11.8% of the males reported daily use versus 4.0% of the females. The comparable statistics were 5.3% and 2.7% in 1992. After 1995 daily drinking began to increase among the 19- to 22-year-olds for both genders but leveled a few years later. There is still a large gender difference for daily drinking among the 19- to 22-year-old age group in 2001—7.6% for males versus 3.0% for females—but not nearly as large as it had been in 1981 (11.8% versus 4.0%). The gender differences have been similar for the older age groups (in 2001, for example, 7.3% versus 3.0% among 23- to 26-year-olds), and there has been little evidence of any convergence.

  There also are long-established and large gender differences in all age groups on ***occasional heavy drinking*** or "binge drinking" (i.e., having five or more drinks in a row at least once in the past two weeks). Males in the 19- to 22-year-old band showed some longer-term decline in this statistic, from 54% in 1986 to 45% in 1995, thus narrowing the gender gap (from 24 percentage points in 1986 to 17 in 1995). Since 1995 the rates for both genders have drifted up a few percentage points. In the two older age bands (23- to 26-year-olds and 27- to 30-year-olds), both the binge drinking rates and the sizeable gender differences have been stable for the most part. However, from 1997 to 2001 both sexes showed some slight increase in binge drinking in the 23- to 26-year-old group, much as happened among the 19- to 22-year-olds.

- For ***cigarette smoking*** the similarities between the genders in both absolute levels and in trends are what is most striking, though there are some differences. All three age groups showed a long-term decline in ***daily smoking*** rates for both males and females since data were first available for each, at least through 1990: 19- to 22-year-olds from 1980 to 1990; 23- to 26-year-olds from 1984 to 1992; and 27- to 30-year-olds from 1988 to 1994. Male and female daily smoking rates have also been very close, particularly in the two older age groups, but among the 19- to 22-year-olds there was a crossover after 1993—up to that point females had slightly higher 30-day prevalence rates, but after that males did. Among the 23- to 26-year-olds, a small gap has opened over the last few years, with males slightly higher.

There have been some increases in the last decade in 30-day smoking rates among the two younger groups, and especially among the males. For example, from 1993 to 1999, 19- to 22-year-old males increased from 29% to 37%, while females increased from 29% to 34%. Because smoking rates in high school graduating classes since 1992 have been on the rise, and because we know that class cohorts tend to maintain their relative differences over time, we had predicted the increase in smoking among 19- to 22-year-olds in subsequent years, and eventually in the older age bands as the recent heavier-smoking high school class cohorts grow older. Beginning in 1996, smoking began to rise among the 23- to 26-year-olds. Again, it has risen more among males. But, it stopped rising after 1997 among males that age (unlike daily smoking) and after 1999 among females.

Regional Differences in Trends

The respondent's current state of residence was first asked in the 1987 follow-up survey; thus trend data by region exist only for the interval since then. In this case changes have been examined for all 19- to 28-year-olds combined to increase the reliability of the estimates. Because gender and urbanicity crosscut all regions, they have less sampling error than when the sample is divided into four separate regions. (All regions are represented by between 1,000 and 2,200 cases in all years.) In general, the changes that have occurred since 1987 have been fairly consistent across regions, particularly in terms of the direction of the change.

- There were substantial drops in all four regions between 1987 (the initial measurement point) and 1991 for ***any illicit drug***, ***marijuana***, ***any illicit drug other than marijuana***, ***cocaine***, ***crack***, and ***amphetamines***. Since 1991, there has been a leveling or increase in the use of these drugs in most or all regions, with the exception of ***cocaine***, which continued to decline through the mid-1990s before beginning to inch up in the years since.

- The proportion of 19- to 28-year-olds using ***any illicit drug*** has been consistently lowest in the South and highest in the West and Northeast. For ***marijuana*** use, the South stands out as being consistently lowest and for the most part the North Central has been second lowest. Generally, the other two regions have been fairly close to one another. For the use of ***any illicit drug other than marijuana***, the West stood out as consistently highest, with the other three regions nearly identical between 1990 and 2000. (In 2001 the Northeast was closer to the West in the two younger age bands.) As discussed later in this chapter, from 1991 through 1995 the West has had the highest rates of ***LSD*** use among young adults (at least until 1995, when use dropped in the West). The West also has tended to have the highest rate of using

hallucinogens other than LSD (again, until 1995, when use dropped in the West and rose in all other regions), and of using ***ice (crystal methamphetamine)***.

- The declines in ***cocaine*** use observed in all regions between 1987 and 1991 were greatest in the two regions that had attained the highest levels of use by the mid-1980s—the West and the Northeast. Similar to the finding for seniors, in 1992, these declines stalled in all regions except the Northeast. A gradual further decline then occurred in all regions through 1996 (1997 for the West) before a slight rise began to occur, no doubt reflecting the affects of generational replacement. Much less regional variability remains in 2001 than in 1987.

- All four regions also exhibited an appreciable drop in ***crack*** use between 1987 and 1991, again with the greatest declines in the West and Northeast, where prevalence had been the highest. Use then generally leveled in all regions except the South, where it continued a gradual decline through 1997. As was true for cocaine generally, annual prevalence rates among the regions have converged; they now stand between 0.9% in the South and 1.7% in the West. (It is worth noting that lifetime use of crack stands out more in the West—and has for some years—compared to all other regions. For example, 7% of the 19- to 28-year-olds in the West in 2001 indicated having used crack at some time, compared to 3.5% to 4.6% in the other three regions.)

- Through 1994, rates of ***inhalant*** use remained relatively stable, quite low, and about equal in all four regions among 19- to 28-year-olds. Annual use then became higher in the Northeast, after rises in 1995 and 1996, and it remained higher through 2001. It now stands at 2.6% in the Northeast and 0.9%, the lowest, in the West.

- ***LSD*** use rose in all four regions between 1989 and about 1995, with the West showing the highest prevalence rate. Between 1995 and 1997, rates converged and remained fairly level, with a decrease occurring in 1998 for all regions. Annual prevalence of ***LSD*** now stands at 2.6% to 4.1% for all regions among 19- to 28-year-olds. In the late 1980s and early 1990s, the use of ***hallucinogens other than LSD*** was highest in the West, and the other three regions had similar levels of use. But by the late 1990s, use in the Northeast region also was higher, along with the West, than in the South or North Central.

- Questions about ***MDMA (ecstasy)*** were added to the follow-up surveys of young adults in 1989. Through 1993, rates were highest in the West and South and lower in the Northeast and North Central regions. Subsequently, use in the Northeast began to increase, approaching the levels of use found in the South and West. But in 1999 there was a sharp increase in the Northeast, as was true among seniors, giving it the highest annual prevalence: 6.1% versus 4.6% in the West, 3.4% in the South, and 1.5% in the North Central. In fact, the North Central has consistently had a much lower level of use than the other three regions. In 2000 all four regions showed a sharp and fairly parallel increase in ecstasy use, and in 2001 the rise decelerated in all four regions. As we have discussed elsewhere, we believe that this deceleration may be caused by a growing awareness of the hazards of ecstasy use.

- The regions have trended fairly similarly in their prevalence of ***amphetamine*** use by young adults. The only modest exception was that use declined more in the Northeast (which started out lowest) in the period 1987 to 1992, giving it a substantially lower rate than the other three regions; and it remained lowest until 1998. (The West has consistently had the highest rate, but not by much.) By the late 1990s, the Northeast had caught up to the North Central and South, making the regional differences very small.

- Questions about the use of ***crystal methamphetamine*** (***ice***) were added in 1990. Three of the regions have shown very low rates since then (from 0.1% to 1.5% annual prevalence). The West has consistently shown a substantially higher rate of lifetime use than any of the other three regions, and it also has shown a considerable increase in lifetime prevalence across the interval 1990 through 2001 (rising from 5.1% to 9.9%). Lifetime prevalence increased in the other three regions from 1995 through 2000, though by less than in the West, and all three showed a turnaround in 2001. Annual prevalence behaved a little differently in the West than did lifetime prevalence: after increasing from 1991 through 1995, it dropped for a couple of years and then leveled off. Annual prevalence in 2001 was 1.8% in the West, 1.2% in the South, 0.7% in the North Central, and 0.6% in the Northeast.

- The use of ***barbiturates*** remained flat, and at about equivalent levels, in all four regions of the country from 1987, when regional data were first available, through 1994. Rates then rose gradually in all regions and the most in the South, where annual use in 2001 was at 4.4%. There is little difference among the other three regions.

- The picture for ***tranquilizers*** is quite similar to that for barbiturates. The regional differences have been small, though the South tends to have a slightly higher rate. Use generally declined in all regions from 1987 through 1993. Since then there has been some increase in the South, where annual prevalence stands at 6.9% in 2001 versus 4.6% to 5.1% in the other regions.

- With respect to ***alcohol*** use, there were modest declines in all four regions between 1987 (when the first measurement was available for 19- to 28-year-olds) and 1992 in 30-day prevalence. The rates for 30-day use then leveled in all regions for two to three years, followed by a bit more decline in all regions except the South, which remained unchanged. The West and the South have consistently had lower rates of 30-day use than the Northeast and North Central, as has generally been true among the high school seniors.

  Current daily use of alcohol also showed a decline from the first (1987) data collection through about 1994 or 1995 in all regions. (The proportional declines were substantial—on the order of 40%–50%.) In 2001 the daily use rates for each region are about where they were in 1995.

- ***Occasional heavy drinking*** (or "binge drinking") has remained fairly level in all regions since 1987. The rates generally have been appreciably higher in the North Central (41% in 2001) and the Northeast (42%) than in the South and the West (31% and 33%, respectively).

- There have been highly consistent regional differences among young adults in ***cigarette smoking*** since data were first available in 1987—and they exist for monthly, daily, and the half-pack-daily prevalence rates. The West consistently has had the lowest rates (e.g., 16% daily prevalence in 2001), the South the next lowest (19% in 2001), and the Northeast and North Central were at 24% and 26% in 2001. After some slight decline in 30-day prevalence in all regions between 1987 and 1989, rates leveled off for about five years (roughly through 1994). There then followed a very gradual increase of a few percentage points through 1998. Daily use continued to rise in the Northeast through 2000 but did not continue to rise in the other regions. For ***half-pack-a-day smoking***, the decline phase was longer (from 1987 through about 1992 or 1993), likely reflecting the lag between smoking initiation and regular heavy smoking. By 2000 the rates in all regions were about the same as they were in 1993, except in the West, where they have dropped about one percentage point.

Population Density Differences in Trends

The analyses presented here for population density return to the use of four-year age groupings, which allows a longer time interval to be examined for the younger strata and for cross-age comparisons of the trends. Among the young adults, five levels of population density are distinguished based on the respondent's answer: very large city, large city, medium-sized city, small town, and farm/country.

- In general, the proportion of young adults using ***any illicit drug*** declined substantially over the long term in communities of all sizes. Among the 19- to 22-year-olds, this decline began in 1980 (when data were first available) and continued through 1991 (or in the cases of very large cities and farm/country areas, 1993); rates then began to increase fairly steadily through 1998 or 1999 among the 19- to 22-year-olds in all areas. In the two older age groups, rates have remained steady in all areas since about 1991 or 1992, following a period of decline after 1985. In general, the farm/country stratum has tended to have lower use than all of the other strata. The other four strata have tended to differ little from one another, though the very large cities generally rank at the top. In 2001, the proportions of 19- to 22-year-olds reporting use of an illicit drug in the past year were 33% for the farm/country strata, 39% for small town, 39% for medium-sized cities, 40% for large-sized cities, and 43% for very large cities. For young adults aged 23 to 26, the differences became smaller by the early 1990s after use had declined generally. Among the 27- to 30-year-olds, the difference has averaged about 8 percentage points between the rural and large city strata, and this has changed rather little since 1988, when data were first available for them.

- The use of ***any illicit drug other than marijuana*** tells a similar story. There was a long period of fairly parallel decline before leveling, along with some convergence of usage rates among the strata at all three age levels. In general, small, large, and very large cities all have tended to have about the same rates, and the farm/country stratum has tended to have the lowest rates, particularly prior to 1990.

- ***Marijuana*** use began to decline in 1981 or 1982 among the 19- to 22-year-olds in all community-sized categories; the declines lasted until about 1991, when 30-day prevalence rates stabilized briefly, before trending upward from 1993 through 2001. (The farm/country stratum showed the increase only from 1993 to 1994; then marijuana use stabilized through 1998, before rising through 2001.) Still, all urban strata are10 to 17 percentage points below where they were in 1980. The most rural region has consistently had the lowest rate of use, and it fell less in the earlier period and rose less in the subsequent increase than did the other strata. Among 27- to 30-year-olds, there has been no increase in marijuana use in the 1990s in any stratum and only a little increase among 23- to 26-year-olds.

- In general there have not been large differences in ***LSD*** use among young adults as a function of community size. Among the 19- to 22-year-olds (the young adult age group with by far the highest rates of LSD use), LSD use in communities of all sizes declined appreciably in the 1980s, particularly in the urban strata, eliminating modest prior differences by 1984. Since around 1989, there has been some increase in use in all strata among the 19- to 22-year-olds, with the most rural region generally continuing to have the lowest prevalence (though not since 1998). Among the 23- to 26-year-old respondents, there were also some modest increases after 1989 in all strata, though they had virtually ended by 1995. In the oldest age group, LSD has remained very low and quite stable.

- The use of ***hallucinogens other than LSD***, taken as a class, fell in communities of all sizes among the young adults between 1980 and about 1988. Then there was a leveling of use for a few years, followed by a modest increase in use among all strata in the 19- to 22-year-old age band through 1997 (with the least increase in the farm/country stratum). In 1998, nearly all of these strata reversed course, showing a leveling or decline in use. In the 23- to 26-year-old group, there have been slightly higher rates in the past seven years among the more urban strata. The sharpest increase occurred in the very large cities in 1999 and 2000, possibly as a result of growing ecstasy use. Among 27- to 30-year-olds, the trend lines have been very flat with only minor stratum differences.

- ***Ecstasy*** (***MDMA***) use was first measured in 1989 and since then has shown the largest increase among the younger adults of any of the drugs. Among the 19- to 22-year-olds, use in 1989 was highest in the very large cities (5% annual prevalence); but prevalence declined in all strata between 1989 and 1994 (to 1.6% or less). By

1998 use had begun to increase in all strata within this age-band, except among the farm/country stratum. The farm/country stratum moved up sharply in 1999, but then the three most urban strata jumped sharply in 2000, opening a fair gap in use as a function of population density. Use began to increase a little later among the 23- to 26-year-olds, and again the three urban strata have shown the most increase, particularly in 2000. Among 27- to 30-year-olds there has been considerably less increase in use, though there has been some in the largest cities starting after 1996 and in the large and medium-sized cities after 1999.

The trends in the past two years tell an interesting. In the very large cities where use had spiked early, use is declining in 2001 in all three age bands. And the large and medium-sized cities are either beginning to level or decline in all three age bands. It is only the small town and farm/country strata that are still showing an increase in use (and in all three age strata). These data support our analysis based on the secondary schools suggesting that the presence of this drug is still diffusing geographically—in this case from more urban to more rural areas—and, were it not for this continued diffusion, ecstasy use would actually be in decline nationally. The data from seniors on perceived risk provide the clue as to the most likely cause of this turnaround. They showed a large jump in the level of perceived risk associated with ecstasy in 2001.

- In the early 1980s, cocaine use was positively correlated with population density, with the highest use in the very large cities. The important drop in ***cocaine*** use after 1986 slowed considerably after 1992 or 1993 in all three age strata and in communities of all sizes, by which time the positive association with population density had been virtually eliminated. Among the 19- to 22-year-olds, and to a lesser extent among the 23- to 26-year-olds, there has been a sustained increase in cocaine use among all strata since about 1993 or 1994. As just stated, usage rates among the strata tended to converge considerably during the period of decline, and this convergence remains, with the very large cities showing rates of cocaine use only slightly higher than the less densely populated areas. After 1994, there was a slight increase in cocaine use among 19- to 22-year-olds in all strata. There has also been some modest increase in cocaine use in all strata in recent years among the 23- to 26-year-olds, but not among any of the 27- to 30-year-old strata.

- ***Crack*** use among all age groups peaked in 1987 or 1988 and, after declining, bottomed out in all population-density strata for several years. Among the 19- to 22-year-olds only, it may have made some comeback in the rural and small town strata in 1999 and 2000, but not in the larger cities. The crack use reported in these young adult samples at all three age levels has borne practically no systematic association with community size.

- ***Amphetamine*** use showed large drops after 1981 among 19- to 22-year-olds in communities of all sizes; after 1984 (the first time point available) among the 23- to 26-year-olds; and, to a lesser extent, after 1988 (first time point available) among the 27- to 30-year-olds. After 1991, use tended to level at relatively low prevalence rates in all strata and age groups, although use rose some after 1992 or 1993 for most population density strata of 19- to 22-year-olds, before leveling around 1998. Use has remained level in the older two age groups. There are virtually no differences in use associated with urbanicity in any of the three age groups, and this has been fairly consistently true since 1983.

- The use of ***crystal methamphetamine*** (***ice***), first measured in 1990, showed a modest increase from the early 1990s through the mid-1990s among young adults generally. This was observable in all three age levels and in most population density groupings. There have not been any sustained differences in use as a function of population density. There was a rise among 23- to 26-year-olds in the farm/country stratum in 1997 and 1998 (reaching 3.0% annual prevalence in 1998—higher than the other strata), but that finding did not replicate in the other two age bands.

- ***Methaqualone*** use, which in 1981 was rather strongly associated (positively) with population density, dropped to annual prevalence rates of 0.8% or below in all size strata for all three age bands by 1989. Its use is no longer measured in the study.

- Unlike methaqualone, ***barbiturates*** have never shown much correlation with urbanicity, at least as far back as 1980. This remains true in all three age bands, with the exception that use in the farm/country stratum achieved a relatively high level in the last two or three years among both 19- to 22-year-olds and 23- to 26-year-olds, and in 2000 among the 27- to 30-year-olds.

- ***Tranquilizer*** use among young adults has had little or no association with population density over this time interval either; again with the exception that there was an increase in the farm/country stratum over the last four or five years among 19- to 22-year-olds.

- From 1980 to 1995, annual ***heroin*** prevalence was less than 1.0%—usually much less—in all strata for all three age bands. After 1994, use among 19- to 22-year-olds in all strata rose and reached 1% in the three urban strata by 1998. In fact, in the very large cities, it reached 1.6% in 1996 (versus 0.3% to 0.7% in the other strata). Use of heroin is generally highest in the very large cities.

- The annual use of ***narcotics other than heroin*** had some positive association with degree of population density in the early 1980s; however, it has shown rather little association since then, due to a greater decline in use in several urban strata. Since 1993, use has increased among 19- to 22-year-olds across all community sizes, and the same has happened since 1995 or 1996 among the 23- to 26-year-olds.

- The absolute levels of ***inhalant*** use have remained low in these age groups, particularly above age 22. However, during the mid- to late 1980s, there was a gradual increase in use among 19- to 22-year-olds in all community-size strata. There has been no strong or consistent association with population density, though the very large cities generally have tended to have higher rates than the other areas among 19- to 22-year-olds, particularly in the last four years.

- There have been few differences in the 30-day prevalence of drinking ***alcohol*** among 19- to 22-year-olds since data were first available on them in 1980, except for the fact that the farm/country stratum has tended to have lower than average use. In the two older age bands, however, there has been a fairly consistent correlation between urbanicity and use of alcohol in the past 30 days. But there have been no consistent differences in current ***daily drinking*** associated with urbanicity in any of the three age bands. For ***occasional heavy drinking***, all strata have been fairly close across time at all three age levels, with the exception that the farm/country areas have fairly consistently shown the lowest rates of binge drinking at all ages.

- ***Cigarette smoking*** has been negatively associated with urbanicity in all three age strata, without much evidence of differential trends related to degree of urbanicity, with one exception. Among 19- to 22-year-olds, all smoking prevalence measures rose from 1997 through 1999 in the farm/country and small town strata, while most other strata remained level. The differences in 1999 were most striking for half-pack-a-day smoking among the 19- to 22-year-olds: farm/country (24% prevalence), small town (19%), medium and large cities (both 15%), and very large cities (10%). This compares with 1985, when there was virtually no difference in half-pack smoking rates among these strata (all were at 18% or 19%). Thus, smoking among those in their early twenties has become more concentrated in the nonurban populations. In 2000 there was a decline or leveling in 30-day prevalence in all strata among the 19- to 22-year-olds, but less systematic change in 2001. The continuing declines in smoking among seniors would lead us to expect further declines in the young adults, as well.

TABLE 5-1

Trends in Lifetime Prevalence of Various Types of Drugs Among Respondents of Modal Age 19-28

(Entries are percentages)

	Percentage who used in lifetime																
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00-'01 change
Approx. Wtd. N =	*(6900)*	*(6800)*	*(6700)*	*(6600)*	*(6700)*	*(6600)*	*(6800)*	*(6700)*	*(6500)*	*(6400)*	*(6300)*	*(6400)*	*(6200)*	*(6000)*	*(5700)*	*(5800)*	
Any Illicit Drug[a]	70.5	69.9	67.9	66.4	64.5	62.2	60.2	59.6	57.5	57.4	56.4	56.7	57.0	57.4	58.2	58.1	0.0
Any Illicit Drug[a] Other than Marijuana	48.4	47.0	44.6	42.7	40.8	37.8	37.0	34.6	33.4	32.8	31.0	30.5	29.9	30.2	31.3	31.6	+0.4
Marijuana	66.5	66.0	63.8	62.8	60.2	58.6	56.4	55.9	53.7	53.6	53.5	53.8	54.4	54.6	55.1	55.7	+0.6
Inhalants[b]	12.3	12.7	12.6	13.2	12.5	13.4	13.5	14.1	13.2	14.5	14.1	14.1	14.2	14.2	14.3	12.8	-1.4
Inhalants, Adj.[c]	18.6	15.7	15.0	NA	13.5	14.1	13.9	14.5	13.5	NA	NA	NA	NA	NA	NA	NA	----
Nitrites[d]	2.6	6.9	6.2	NA	1.9	1.4	1.2	1.3	1.0	NA	NA	NA	NA	NA	NA	NA	----
Hallucinogens[e]	18.5	17.1	17.0	15.9	16.1	15.7	15.7	15.4	15.4	16.1	16.4	16.7	17.4	18.0	18.4	18.3	-0.1
Hallucinogens, Adj.[e,f]	20.1	17.2	17.2	NA	16.5	16.0	15.9	15.5	15.5	16.2	16.5	16.7	17.5	18.2	18.5	18.4	-0.1
LSD	14.6	13.7	13.8	12.7	13.5	13.5	13.8	13.6	13.8	14.5	15.0	15.0	15.7	16.2	16.4	16.0	-0.4
PCP[g]	8.4	4.8	5.0	NA	2.5	3.1	2.0	1.9	2.0	2.2	1.9	2.4	2.7	2.3	2.3	3.1	+0.7
MDMA (Ecstasy)[h]	NA	NA	NA	3.3	3.7	3.2	3.9	3.8	3.8	4.5	5.2	5.1	7.2	7.1	11.6	13.0	+1.3
Cocaine	32.0	29.3	28.2	25.8	23.7	21.0	19.5	16.9	15.2	13.7	12.9	12.0	12.3	12.8	12.7	13.1	+0.4
Crack[i]	NA	6.3	6.9	6.1	5.1	4.8	5.1	4.3	4.4	3.8	3.9	3.6	3.8	4.3	4.6	4.7	+0.1
Other Cocaine[j]	NA	28.2	25.2	25.4	22.1	19.8	18.4	15.1	13.9	12.4	11.9	11.3	11.5	11.8	11.7	12.1	+0.4
Heroin	1.3	1.3	1.1	1.0	0.9	0.9	0.9	0.9	0.8	1.1	1.3	1.3	1.6	1.7	1.8	2.0	+0.1
Other Narcotics[k]	10.7	10.6	9.8	9.6	9.4	9.3	8.9	8.1	8.2	9.0	8.3	9.2	9.1	9.5	10.0	11.5	+1.5 ss
Amphetamines, Adj[k,l]	32.3	30.8	28.8	25.3	24.4	22.4	20.2	18.7	17.1	16.6	15.3	14.6	14.3	14.1	15.0	15.0	-0.1
Ice[m]	NA	NA	NA	NA	2.5	2.9	2.2	2.7	2.5	2.1	3.1	2.5	3.4	3.3	3.9	4.0	+0.1
Sedatives[k]	16.7	15.0	13.2	12.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	----
Barbiturates[k]	11.1	9.7	8.9	7.9	8.7	8.2	7.4	6.5	6.4	6.7	6.6	6.5	6.9	7.4	8.1	7.8	-0.3
Methaqualone[k]	13.1	11.6	9.7	8.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	----
Tranquilizers[e,k]	17.6	16.5	15.1	13.5	12.9	11.8	11.3	10.5	9.9	9.7	9.3	8.6	9.6	9.6	10.5	11.9	+1.3 s
Alcohol[n]	94.8	94.9	94.8	94.5	94.3	94.1	93.4	92.1	91.2	91.6	91.2	90.7	90.6	90.2	90.7	89.9	-0.8
Cigarettes	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	----
Steroids[o]	NA	NA	NA	1.1	1.2	1.7	1.9	1.5	1.3	1.5	1.5	1.4	1.4	1.9	1.4	1.4	0.0

Source: The Monitoring the Future Study, the University of Michigan.

NOTES: Level of significance of difference between the two most recent years: s = .05, ss = .01, sss = .001. Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding.

'NA' indicates data not available.

See footnotes on next page.

BEST COPY AVAILABLE

FOOTNOTES FOR TABLES 5-1 THROUGH 5-4

[a] Use of "any illicit drug" includes any use of marijuana, hallucinogens, cocaine, or heroin, or any use of other narcotics, amphetamines, barbiturates, methaqualone (until 1990), or tranquilizers not under a doctor's orders.

[b] This drug was asked about in four of the five questionnaire forms in 1986-1989, five of the six questionnaire forms in 1990-1998, and three of six questionnaire forms in 1999-2001. Total N in 2001 is approximately 2900.

[c] Adjusted for underreporting of amyl and butyl nitrites, except in 1995-2001, when questions about nitrite use were dropped.

[d] This drug was asked about in one questionnaire form. Total N in 1994 was approximately 1000.

[e] In 2001, the question text was changed on half of the questionnaire forms. For hallucinogens, "psychedelics" was changed to "hallucinogens" and "shrooms" was added to the list of examples. For tranquilizers, "Miltown" was replaced with "Xanax" in the list of examples. These changes are partially responsible for the discontinuity in the 2001 data.

[f] Adjusted for underreporting of PCP.

[g] This drug was asked about in one of the five questionnaire forms in 1986-1988, and in one of the six questionnaire forms in 1990-2001. Total N in 2001 is approximately 1000.

[h] This drug was asked about in two of the six questionnaire forms in 1990-2001. Total N in 2001 is approximately 1900.

[i] This drug was asked about in two of the five questionnaire forms in 1987-1989, and in all six questionnaire forms in 1990-2001.

[j] This drug was asked about in one of the five questionnaire forms in 1987-1989, and in four of the six questionnaire forms in 1990-2001. Total N in 2001 is approximately 3900.

[k] Only drug use which was not under a doctor's orders is included here.

[l] Based on the data from the revised question, which attempts to exclude the inappropriate reporting of nonprescription amphetamines.

[m] This drug was asked about in two of the five questionnaire forms in 1989, and in two of the six questionnaire forms in 1990-2001. Total N in 2001 is approximately 1900.

[n] In 1993 and 1994, the question text was changed slightly in three of the six questionnaire forms to indicate that a "drink" meant "more than just a few sips." Because this revision resulted in rather little change in reported prevalence in the surveys of high school graduates, the data for all forms combined are used in order to provide the most reliable estimate of change. After 1994, the new question text was used in all six of the questionnaire forms.

[o] This drug was asked about in one of the five questionnaire forms in 1989, and in two of the six questionnaire forms in 1990-2001. Total N in 2001 is approximately 1900.

BEST COPY AVAILABLE

TABLE 5-2
Trends in Annual Prevalence of Various Types of Drugs Among Respondents of Modal Age 19-28

(Entries are percentages)

	Percentage who used in last twelve months																
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00-'01 change
Approx. Wtd. N =	*(6900)*	*(6800)*	*(6700)*	*(6600)*	*(6700)*	*(6600)*	*(6800)*	*(6700)*	*(6500)*	*(6400)*	*(6300)*	*(6400)*	*(6200)*	*(6000)*	*(5700)*	*(5800)*	
Any Illicit Drug[a]	41.9	39.3	36.3	32.8	30.7	27.0	28.3	28.4	28.4	29.8	29.2	29.2	29.9	30.3	30.8	32.1	+1.3
Any Illicit Drug[a] Other than Marijuana	27.0	23.9	21.3	18.3	16.7	14.3	14.1	13.0	13.0	13.8	13.2	13.6	13.2	13.7	14.9	15.4	+0.5
Marijuana	36.5	34.8	31.8	29.0	26.1	23.8	25.2	25.1	25.5	26.5	27.0	26.8	27.4	27.6	27.9	29.2	+1.2
Inhalants[b]	1.9	2.1	1.8	1.9	1.9	2.0	1.9	2.1	2.1	2.4	2.2	2.3	2.1	2.3	2.1	1.7	-0.4
Inhalants, Adj.[c]	3.0	2.8	2.4	NA	2.1	2.2	1.9	2.3	2.2	NA	NA	NA	NA	NA	NA	NA	----
Nitrites[d]	2.0	1.3	1.0	NA	0.4	0.2	0.1	0.4	0.3	NA	NA	NA	NA	NA	NA	NA	----
Hallucinogens[e]	4.5	4.0	3.9	3.6	4.1	4.5	5.0	4.5	4.8	5.6	5.6	5.8	5.2	5.4	5.4	5.4	-0.1
Hallucinogens, Adj.[e,f]	4.9	4.1	3.9	NA	4.2	4.6	5.1	4.6	4.9	5.7	5.6	5.9	5.2	5.5	5.5	5.5	-0.1
LSD	3.0	2.9	2.9	2.7	3.3	3.8	4.3	3.8	4.0	4.6	4.5	4.4	3.5	4.0	3.7	3.4	-0.3
PCP[g]	0.8	0.4	0.4	NA	0.2	0.3	0.3	0.2	0.3	0.3	0.2	0.5	0.6	0.6	0.3	0.6	+0.3
MDMA (Ecstasy)[h]	NA	NA	NA	1.4	1.5	0.8	1.0	0.8	0.7	1.6	1.7	2.1	2.9	3.6	7.2	7.5	+0.3
Cocaine	19.7	15.7	13.8	10.8	8.6	6.2	5.7	4.7	4.3	4.4	4.1	4.6	4.9	5.4	5.4	5.8	+0.4
Crack[i]	3.2	3.1	3.1	2.5	1.6	1.2	1.4	1.3	1.1	1.1	1.1	1.0	1.1	1.4	1.2	1.3	+0.1
Other Cocaine[j]	NA	13.6	11.9	10.3	8.1	5.4	5.1	3.9	3.6	3.9	3.8	4.3	4.5	4.8	4.8	5.3	+0.4
Heroin	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.4	0.4	0.3	0.4	0.4	0.4	0.5	+0.1
Other Narcotics[k]	3.1	3.1	2.7	2.8	2.7	2.5	2.5	2.2	2.5	3.0	2.9	3.3	3.4	3.8	4.1	5.0	+0.9 *s*
Amphetamines, Adj.[k,l]	10.6	8.7	7.3	5.8	5.2	4.3	4.1	4.0	4.5	4.6	4.2	4.6	4.5	4.7	5.4	5.8	+0.4
Ice[m]	NA	NA	NA	NA	0.4	0.3	0.4	0.8	0.9	1.2	0.9	0.9	1.1	0.9	1.2	1.1	-0.2
Sedatives[k]	3.0	2.5	2.1	1.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	----
Barbiturates[k]	2.3	2.1	1.8	1.7	1.9	1.8	1.6	1.9	1.8	2.1	2.2	2.4	2.5	2.8	3.4	3.7	+0.3
Methaqualone[k]	1.3	0.9	0.5	0.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	----
Tranquilizers[e,k]	5.4	5.1	4.2	3.7	3.7	3.5	3.4	3.1	2.9	3.4	3.2	3.1	3.8	3.7	4.6	5.5	+0.9 *s*
Alcohol[n]	88.6	89.4	88.6	88.1	87.4	86.9	86.2	85.3	83.7	84.7	84.0	84.3	84.0	84.1	84.0	84.3	+0.3
Cigarettes	40.1	40.3	37.7	38.0	37.1	37.7	37.9	37.8	38.3	38.8	40.3	41.8	41.6	41.1	40.9	41.1	+0.2
Steroids[o]	NA	NA	NA	0.5	0.3	0.5	0.4	0.3	0.4	0.5	0.3	0.5	0.4	0.6	0.4	0.4	0.0

Source: The Monitoring the Future Study, the University of Michigan.

NOTES: Level of significance of difference between the two most recent years: *s* = .05, *ss* = .01, *sss* = .001. Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding.

'NA' indicates data not available.

See footnotes at end of Table 5-1.

TABLE 5-3

Trends in Thirty-Day Prevalence of Various Types of Drugs Among Respondents of Modal Age 19-28

(Entries are percentages)

	Percentage who used in last thirty days																
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00-'01 change
Approx. Wtd. N =	*(6900)*	*(6800)*	*(6700)*	*(6600)*	*(6700)*	*(6600)*	*(6800)*	*(6700)*	*(6500)*	*(6400)*	*(6300)*	*(6400)*	*(6200)*	*(6000)*	*(5700)*	*(5800)*	
Any Illicit Drug[a]	25.8	23.4	20.5	17.7	15.9	15.1	14.8	14.9	15.3	15.8	15.8	16.4	16.1	17.1	18.1	18.8	+0.7
Any Illicit Drug[a] Other than Marijuana	13.0	10.7	9.5	7.5	6.0	5.4	5.5	4.9	5.3	5.7	4.7	5.5	5.5	6.0	6.4	7.0	+0.6
Marijuana	22.0	20.7	17.9	15.5	13.9	13.5	13.3	13.4	14.1	14.0	15.1	15.0	14.9	15.6	16.1	16.7	+0.6
Inhalants[b]	0.4	0.6	0.6	0.5	0.6	0.5	0.6	0.7	0.5	0.7	0.5	0.5	0.7	0.8	0.5	0.4	-0.1
Inhalants, Adj.[c]	0.7	0.9	0.9	NA	0.7	0.6	0.7	0.7	0.6	NA	NA	NA	NA	NA	NA	NA	----
Nitrites[d]	0.5	0.5	0.4	NA	0.1	*	0.1	0.2	0.1	NA	NA	NA	NA	NA	NA	NA	----
Hallucinogens[e]	1.3	1.2	1.1	1.1	0.9	1.1	1.5	1.2	1.4	1.7	1.2	1.5	1.4	1.3	1.2	1.2	0.0
Hallucinogens, Adj.[e,]	1.4	1.2	1.1	NA	1.0	1.2	1.6	1.2	1.4	1.7	1.3	1.5	1.5	1.3	1.2	1.2	0.0
LSD	0.9	0.8	0.8	0.8	0.6	0.8	1.1	0.8	1.1	1.3	0.7	0.9	1.0	0.8	0.8	0.7	0.0
PCP[g]	0.2	0.1	0.3	NA	0.2	0.1	0.2	0.2	0.1	0.0	0.1	0.1	0.2	0.2	0.0	0.0	0.0
MDMA (Ecstasy)[h]	NA	NA	NA	0.4	0.2	0.1	0.3	0.3	0.2	0.4	0.3	0.6	0.8	1.3	1.9	1.8	-0.1
Cocaine	8.2	6.0	5.7	3.8	2.4	2.0	1.8	1.4	1.3	1.5	1.2	1.5	1.7	1.9	1.7	2.2	+0.6 s
Crack[i]	NA	1.0	1.2	0.7	0.4	0.4	0.4	0.4	0.3	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.0
Other Cocaine[j]	NA	4.8	4.8	3.4	2.1	1.8	1.7	1.1	1.0	1.3	1.1	1.5	1.5	1.6	1.5	1.8	+0.4
Heroin	0.1	0.1	0.1	0.1	0.1	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	+0.1
Other Narcotics[k]	0.9	0.9	0.7	0.7	0.7	0.6	0.7	0.7	0.6	0.9	0.7	0.9	0.9	1.2	1.4	1.7	+0.3
Amphetamines, Adj.[k,l]	4.0	3.2	2.7	2.1	1.9	1.5	1.5	1.5	1.7	1.7	1.5	1.7	1.7	1.9	2.3	2.4	+0.1
Ice[m]	NA	NA	NA	NA	0.1	*	0.1	0.3	0.5	0.3	0.3	0.3	0.3	0.4	0.4	0.4	-0.1
Sedatives[k]	0.9	0.8	0.7	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	----
Barbiturates[k]	0.7	0.7	0.7	0.5	0.6	0.5	0.5	0.6	0.6	0.8	0.8	0.9	0.9	1.1	1.3	1.7	+0.3
Methaqualone[k]	0.3	0.2	0.1	0.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	----
Tranquilizers[e,k]	1.8	1.6	1.4	1.2	1.1	0.9	1.0	1.0	0.8	1.1	0.7	1.1	1.2	1.3	1.8	2.1	+0.3
Alcohol[n]	75.1	75.4	74.0	72.4	71.2	70.6	69.0	68.3	67.7	68.1	66.7	67.5	66.9	68.2	66.8	67.2	+0.4
Cigarettes	31.1	30.9	28.9	28.6	27.7	28.2	28.3	28.0	28.0	29.2	30.1	29.9	30.9	30.3	30.1	30.2	+0.1
Steroids[o]	NA	NA	NA	0.2	0.1	0.2	0.1	0.0	0.1	0.2	0.2	0.2	0.2	0.3	0.1	0.1	0.0

Source: The Monitoring the Future Study, the University of Michigan.

NOTES: Level of significance of difference between the two most recent years: s = .05, ss = .01, sss = .001. Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding.

'*' indicates a prevalence rate of less than 0.05% but greater than true zero.

'NA' indicates data not available.

See footnotes at end of Table 5-1.

BEST COPY AVAILABLE

TABLE 5-4

Trends in Thirty-Day Prevalence of Daily Use of Various Types of Drugs Among Respondents of Modal Age 19-28

(Entries are percentages)

	Percentage who used daily in last thirty days																'00-'01
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	change
Approx. Wtd. N =	*(6900)*	*(6800)*	*(6700)*	*(6600)*	*(6700)*	*(6600)*	*(6800)*	*(6700)*	*(6500)*	*(6400)*	*(6300)*	*(6400)*	*(6200)*	*(6000)*	*(5700)*	*(5800)*	
Marijuana	4.1	4.2	3.3	3.2	2.5	2.3	2.3	2.4	2.8	3.3	3.3	3.8	3.7	4.4	4.2	5.0	+0.8 s
Cocaine	0.2	0.1	0.2	0.1	*	0.1	*	0.1	*	0.1	*	*	*	0.1	*	0.1	0.0
Amphetamines, Adj.[k,l]	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.2	+0.1
Alcohol																	
Daily[a]	6.1	6.6	6.1	5.5	4.7	4.9	4.5	4.5	3.9	3.9	4.0	4.6	4.0	4.8	4.1	4.4	+0.3
5+ drinks in a row in last 2 weeks	36.1	36.2	35.2	34.8	34.3	34.7	34.2	34.4	33.7	32.6	33.6	34.4	34.1	35.8	34.7	35.9	+1.2
Cigarettes																	
Daily	25.2	24.8	22.7	22.4	21.3	21.7	20.9	20.8	20.7	21.2	21.8	20.6	21.9	21.5	21.8	21.2	-0.6
Half-pack or more per day	20.2	19.8	17.7	17.3	16.7	16.0	15.7	15.5	15.3	15.7	15.3	14.6	15.6	15.1	15.1	14.6	-0.4

Source: The Monitoring the Future Study, the University of Michigan.

NOTES: Level of significance of difference between the two most recent years: *s* = .05, *ss* = .01, *sss* = .001. Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding.

The illicit drugs not listed here show a daily prevalence of 0.2% or less in all years.
'*' indicates a prevalence rate of less than 0.05% but greater than true zero.

See footnotes at end of Table 5-1.

TABLE 5-5

Trends in Annual and Thirty-Day Prevalence of an Illicit Drug Use Index[a] Among Respondents of Modal Age 19-28

(Entries are percentages)

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00-'01 change
Percentage reporting use in last twelve months																	
Any Illicit Drug	41.9	39.3	36.3	32.8	30.7	27.0	28.3	28.4	28.4	29.8	29.2	29.2	29.9	30.3	30.8	32.1	+1.3
Males	45.3	42.6	39.5	35.7	33.6	30.0	31.4	31.1	32.3	32.1	31.6	31.9	33.6	33.9	34.4	34.9	+0.5
Females	39.0	36.5	33.6	30.5	28.3	24.5	25.8	26.1	25.3	28.1	27.3	27.1	27.1	27.6	28.2	30.1	+1.9
Any Illicit Drug Other than Marijuana	27.0	23.9	21.3	18.3	16.7	14.3	14.1	13.0	13.0	13.8	13.2	13.6	13.2	13.7	14.9	15.4	+0.5
Males	30.4	26.5	23.8	21.0	19.1	16.4	16.3	14.7	16.2	16.2	15.4	15.6	16.2	16.7	17.8	17.2	-0.6
Females	24.0	21.6	19.4	16.2	14.7	12.5	12.2	11.6	10.5	12.0	11.4	12.0	11.0	11.5	12.9	14.1	+1.3
Percentage reporting use in last thirty days																	
Any Illicit Drug	25.8	23.4	20.5	17.7	15.9	15.1	14.8	14.9	15.3	15.8	15.8	16.4	16.1	17.1	18.1	18.8	+0.7
Males	29.9	27.1	23.7	21.1	18.8	18.3	17.9	17.4	19.5	18.6	19.0	19.8	20.1	20.0	21.5	21.9	+0.4
Females	22.2	20.2	17.8	15.0	13.5	12.5	12.4	12.9	12.1	13.5	13.3	13.8	13.2	15.0	15.6	16.6	+0.9
Any Illicit Drug Other than Marijuana	13.0	10.7	9.5	7.5	6.0	5.4	5.5	4.9	5.3	5.7	4.7	5.5	5.5	6.0	6.4	7.0	+0.6
Males	15.2	12.3	10.6	9.1	6.8	6.6	6.5	5.9	7.1	6.8	5.7	6.8	7.1	7.3	7.8	8.1	+0.3
Females	11.0	9.4	8.7	6.2	5.3	4.4	4.7	4.0	3.9	4.8	4.0	4.5	4.4	5.1	5.4	6.3	+0.9
Approximate Weighted N																	
All Respondents	*6900*	*6800*	*6700*	*6600*	*6700*	*6600*	*6800*	*6700*	*6500*	*6400*	*6300*	*6400*	*6200*	*6000*	*5700*	*5800*	
Males	*3200*	*3100*	*3000*	*2900*	*3000*	*3000*	*3000*	*3000*	*2900*	*2800*	*2700*	*2800*	*2700*	*2600*	*2400*	*2400*	
Females	*3700*	*3700*	*3700*	*3700*	*3700*	*3600*	*3700*	*3700*	*3600*	*3600*	*3600*	*3600*	*3500*	*3400*	*3300*	*3400*	

Source: The Monitoring the Future Study, the University of Michigan.

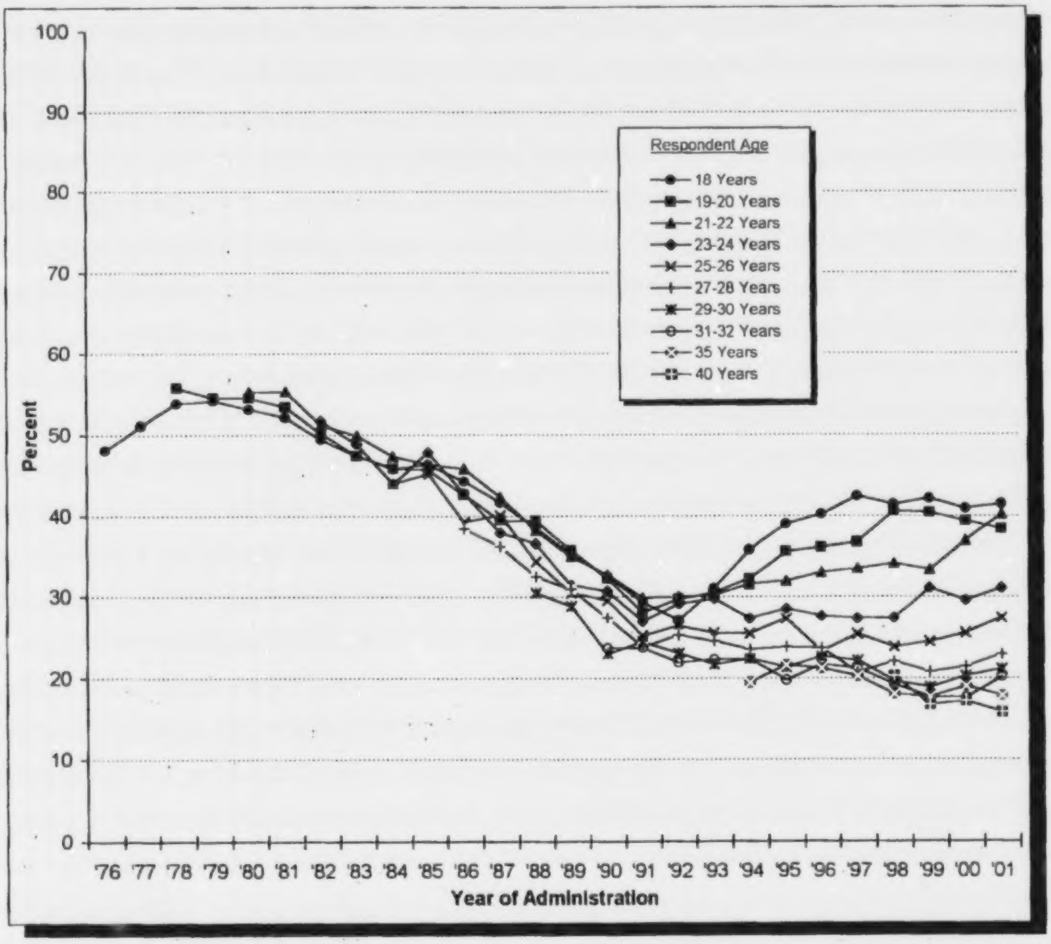
NOTES: Level of significance of difference between the two most recent years: s = .05, ss = .01, sss = .001. Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding.

[a] Use of "any illicit drug" includes any use of marijuana, hallucinogens, cocaine, or heroin, or any use of other narcotics, amphetamines, barbiturates, methaqualone (until 1990), or tranquilizers not under a doctor's orders.

FIGURE 5-1

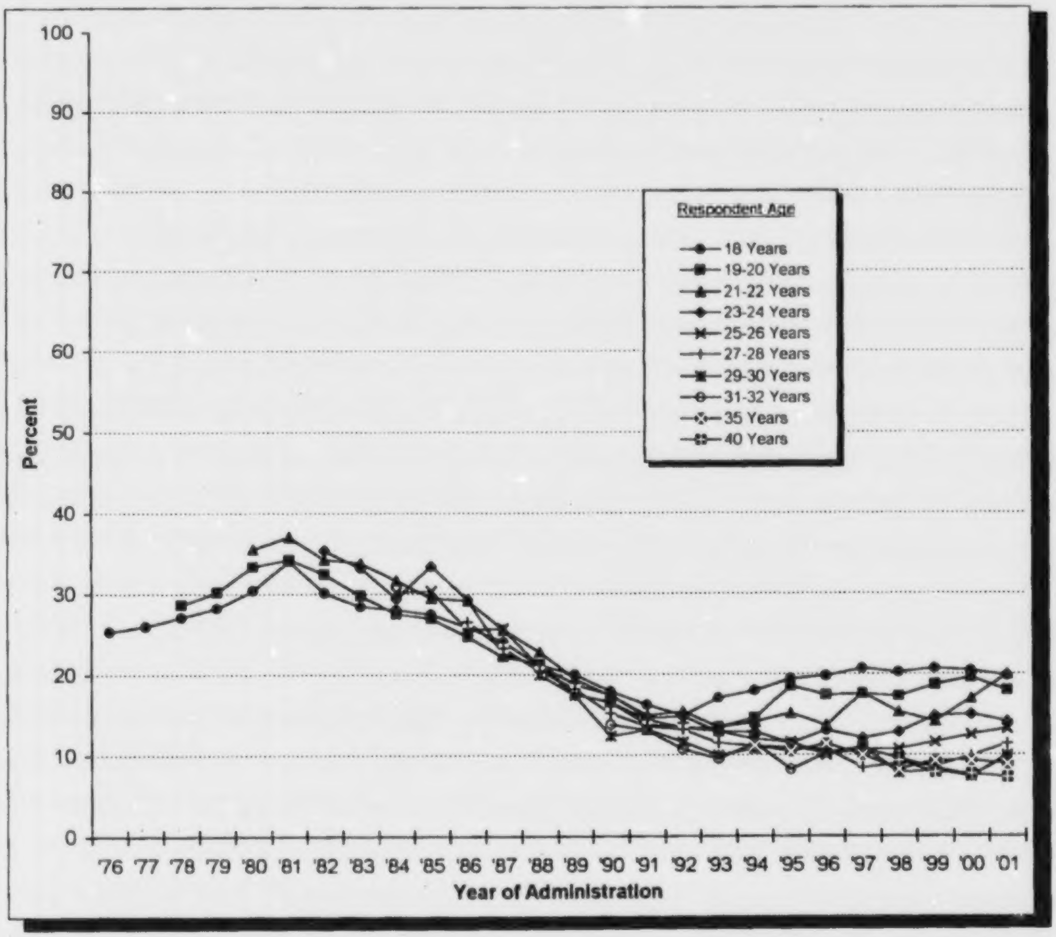
Any Illicit Drug: Trends in Annual Prevalence Among High School Seniors and Adults Through Age 40

by Age Group



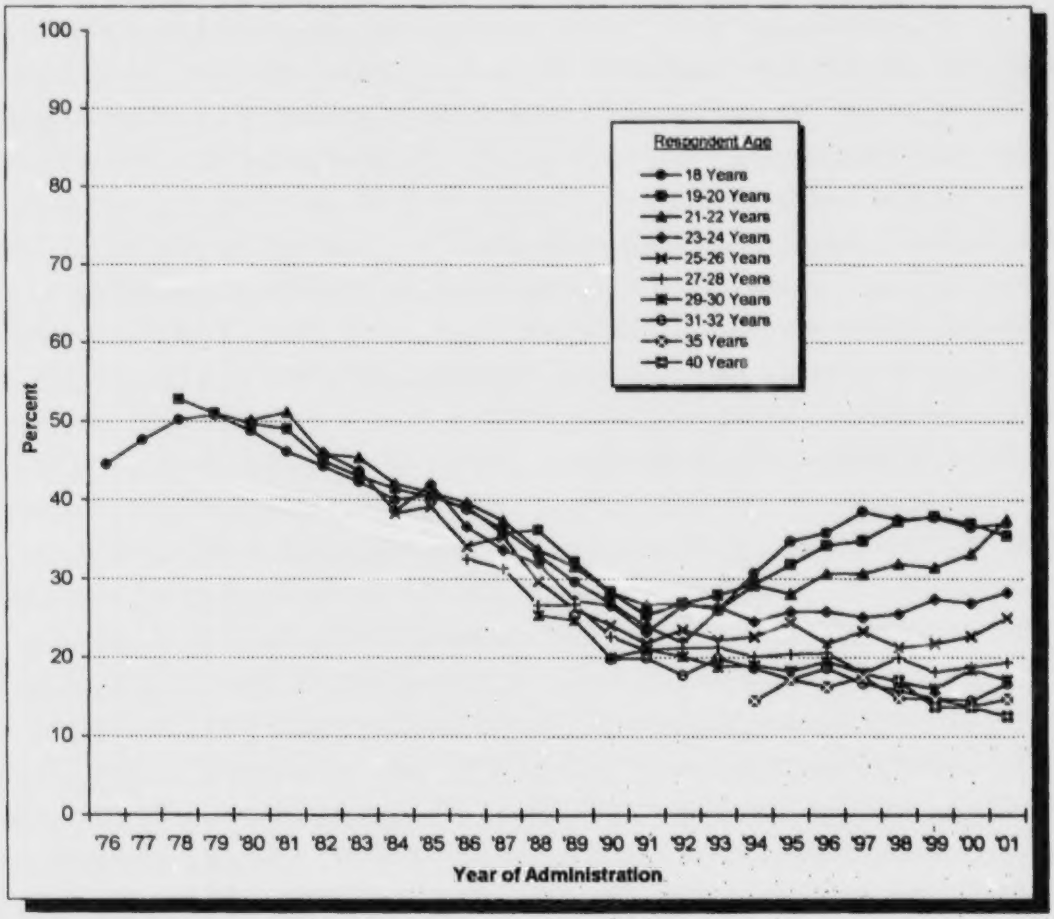
Age of Respondent	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01
18 Years	48.1	51.1	53.8	54.2	53.1	52.1	49.4	47.4	45.8	46.3	44.3	41.7	38.5	35.4	32.5	29.4	27.1	31.0	35.8	39.0	40.2	42.4	41.4	42.1	40.9	41.4
19-20 Years			55.8	54.5	54.5	53.4	50.2	47.4	45.9	45.7	42.6	39.5	39.4	35.7	32.3	28.1	29.7	30.5	32.2	35.6	36.1	36.7	40.6	40.4	39.3	38.4
21-22 Years					55.3	55.4	51.2	49.9	47.3	46.3	45.8	42.3	38.2	35.0	32.7	29.9	30.0	30.2	31.6	31.9	33.0	33.5	34.1	33.3	36.9	40.2
23-24 Years							51.7	48.9	44.0	47.8	42.8	37.9	36.6	31.4	30.7	27.0	29.2	29.8	27.3	28.5	27.6	27.3	27.4	31.1	29.6	31.1
25-26 Years									44.0	45.2	39.3	40.1	34.4	30.5	29.6	25.2	26.4	25.6	25.5	27.3	23.4	25.4	23.9	24.5	25.5	27.4
27-28 Years											38.4	36.2	32.5	30.9	27.4	23.9	25.3	24.6	23.6	23.9	23.7	20.7	22.0	20.8	21.4	22.9
29-30 Years													30.5	28.9	23.0	24.5	23.1	21.7	22.4	21.3	22.7	22.2	19.6	19.0	20.3	21.1
31-32 Years															23.7	23.8	21.9	22.3	22.4	19.8	21.7	21.2	19.3	17.7	17.6	20.2
35 Years																			19.5	21.6	21.2	20.3	18.1	17.7	19.1	17.8
40 Years																							20.3	16.7	17.2	15.8

FIGURE 5-2
Any Illicit Drug Other than Marijuana: Trends in Annual Prevalence Among High School Seniors and Adults Through Age 40
by Age Group



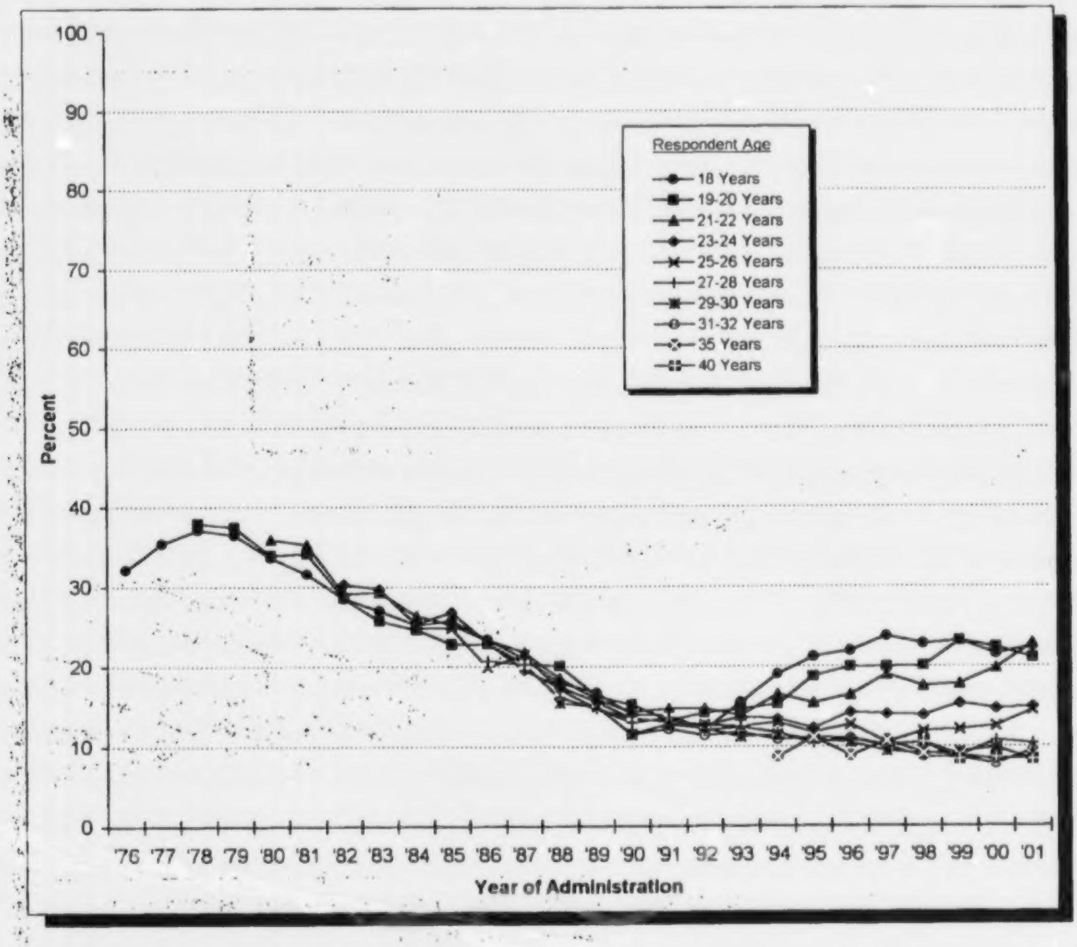
Age of Respondent	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01
18 Years	25.4	26.0	27.1	28.2	30.4	34.0	30.1	28.4	28.0	27.4	25.9	24.1	21.1	20.0	17.9	16.2	14.9	17.1	18.0	19.4	19.8	20.7	20.2	20.7	20.4	19.8
19-20 Years			28.6	30.2	33.3	34.2	32.4	29.8	27.5	26.9	24.7	22.2	21.3	17.6	16.5	13.8	13.4	13.5	14.6	18.6	17.4	17.6	17.3	18.7	19.6	18.0
21-22 Years					35.5	37.0	34.2	33.7	31.6	29.5	29.1	25.6	22.8	19.4	17.4	14.9	15.4	13.5	14.1	15.2	13.7	17.7	15.3	14.1	17.0	20.0
23-24 Years							35.4	33.2	29.4	33.4	29.3	22.6	21.1	18.8	17.5	14.6	14.8	12.9	12.9	11.5	13.1	12.1	12.9	14.8	15.0	14.1
25-26 Years									30.2	30.3	25.5	25.7	21.0	17.6	16.6	14.4	13.4	13.0	12.0	11.6	10.0	10.7	10.8	11.6	12.5	13.3
27-28 Years											26.5	23.3	20.4	18.2	15.2	13.6	13.2	11.5	11.1	10.9	10.7	8.4	8.9	8.6	9.9	11.4
29-30 Years													20.0	17.4	12.4	13.2	11.6	9.9	10.8	11.0	10.3	11.0	7.8	8.1	7.4	9.9
31-32 Years															13.8	13.1	10.7	9.5	11.5	8.2	10.2	10.8	9.6	8.3	7.4	9.7
35 Years																			11.2	10.4	11.4	10.0	8.2	9.3	9.3	8.8
40 Years																							9.3	7.9	7.7	7.3

FIGURE 5-3a
Marijuana: Trends in Annual Prevalence Among High School Seniors and Adults Through Age 40
by Age Group



Age of Respondent	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01
18 Years	44.5	47.6	50.2	50.8	48.8	46.1	44.3	42.3	40.0	40.6	38.8	36.3	33.1	29.6	27.0	23.9	21.9	26.0	30.7	34.7	35.8	38.5	37.5	37.8	36.5	37.0
19-20 Years			52.8	51.0	49.7	49.0	44.9	43.0	41.4	40.3	39.1	35.8	36.2	32.2	28.4	25.4	26.9	27.9	29.3	31.8	34.2	34.8	37.2	37.9	37.0	35.4
21-22 Years					50.1	51.1	45.8	45.4	42.1	40.9	39.6	37.4	33.7	31.6	28.2	26.8	26.9	26.1	29.2	28.1	30.6	30.6	31.9	31.5	33.2	37.5
23-24 Years							46.0	43.8	38.6	42.0	36.6	33.7	32.0	27.3	26.6	23.2	26.6	26.5	24.6	25.8	25.8	25.1	25.5	27.4	26.9	28.3
25-26 Years									38.3	39.2	34.1	35.4	29.7	26.2	24.1	21.8	23.5	22.2	22.6	24.4	21.7	23.3	21.2	21.8	22.7	25.0
27-28 Years											32.5	31.4	26.7	26.8	22.6	20.9	21.2	21.3	20.1	20.4	20.6	18.0	19.9	18.2	18.8	19.4
29-30 Years													25.4	24.7	20.0	21.0	20.1	18.8	19.0	18.2	19.5	18.0	16.9	16.0	18.4	17.1
31-32 Years															19.8	19.9	17.7	19.9	18.6	17.2	18.6	16.7	15.8	14.8	14.5	16.7
35 Years																			14.5	17.2	16.3	17.5	14.9	14.7	13.8	14.8
40 Years																							17.1	13.8	13.7	12.5

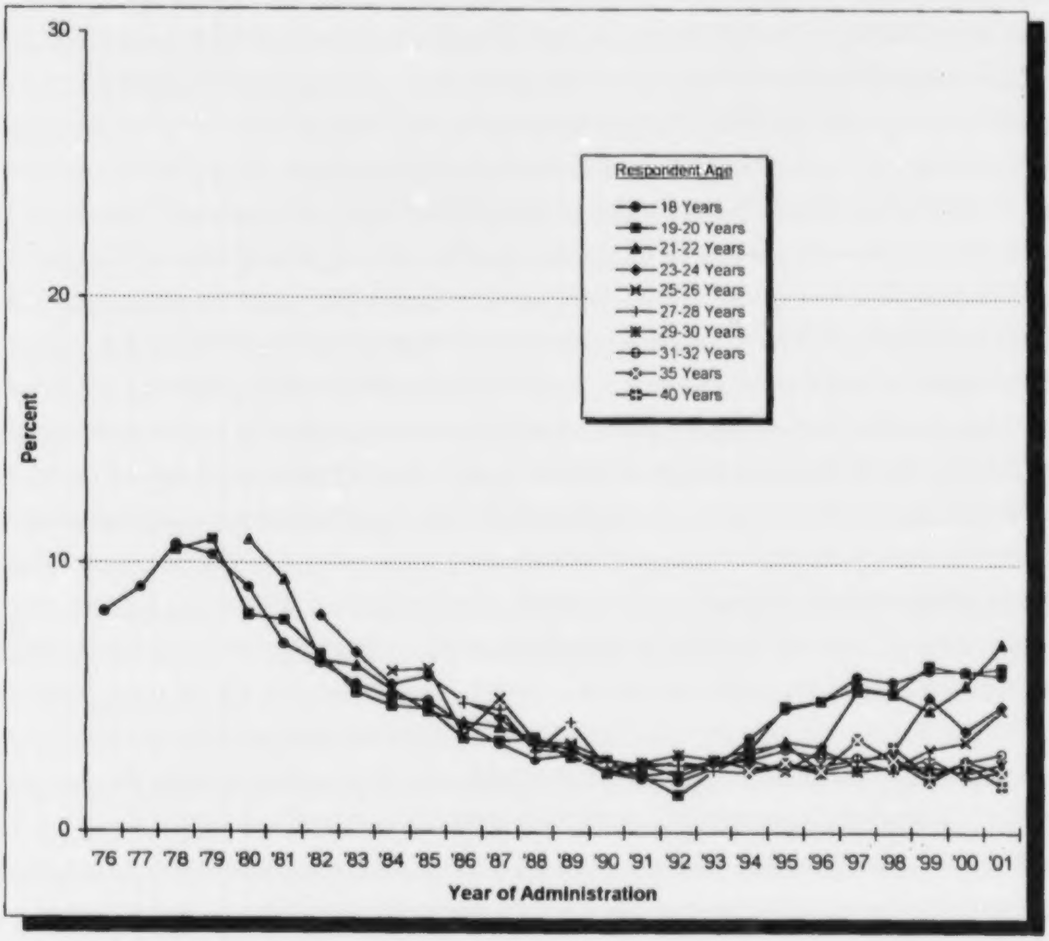
FIGURE 5-3b
Marijuana: Trends in Thirty-Day Prevalence Among High School Seniors and Adults Through Age 40
by Age Group



Age of Respondent	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01
18 Years	32.2	35.4	37.1	36.5	33.7	31.6	28.5	27.0	25.2	25.7	23.4	21.0	18.0	16.7	14.0	13.8	11.9	15.5	19.0	21.2	21.9	23.7	22.8	23.1	21.6	22.4
19-20 Years			38.0	37.5	33.9	34.2	28.6	25.7	24.6	22.8	22.9	20.4	20.1	16.3	15.2	13.2	14.1	14.6	15.3	18.7	19.9	19.9	20.1	23.1	22.3	21.0
21-22 Years					35.9	35.3	29.1	29.3	26.4	25.2	23.3	21.8	18.5	15.9	14.3	14.7	14.7	13.8	16.5	15.4	16.4	18.9	17.5	17.8	19.8	22.9
23-24 Years							30.3	29.7	25.4	26.8	23.0	19.6	17.4	15.6	13.4	13.0	12.5	13.6	13.3	12.2	14.2	14.0	13.8	15.3	14.7	14.9
25-26 Years									24.9	24.8	19.9	21.5	17.2	14.7	13.4	13.0	12.6	12.4	12.9	11.7	12.6	10.5	11.8	12.0	12.5	14.5
27-28 Years											20.7	20.3	16.1	14.7	12.9	13.5	12.0	12.3	11.6	10.4	11.0	10.1	10.5	8.9	10.7	10.3
29-30 Years													15.4	15.0	11.5	12.7	12.2	11.2	11.4	10.8	10.5	9.4	9.0	9.3	9.8	8.3
31-32 Years															11.5	12.1	11.3	11.7	10.8	11.1	10.9	10.0	8.7	8.5	7.7	9.6
35 Years																			8.7	11.1	8.8	10.7	9.1	8.8	8.3	8.8
40 Years																							10.5	8.3	8.5	8.3

BEST COPY AVAILABLE

FIGURE 5-3c
Marijuana: Trends in Thirty-Day Prevalence of Daily Use Among High School Seniors and Adults Through Age 40
by Age Group

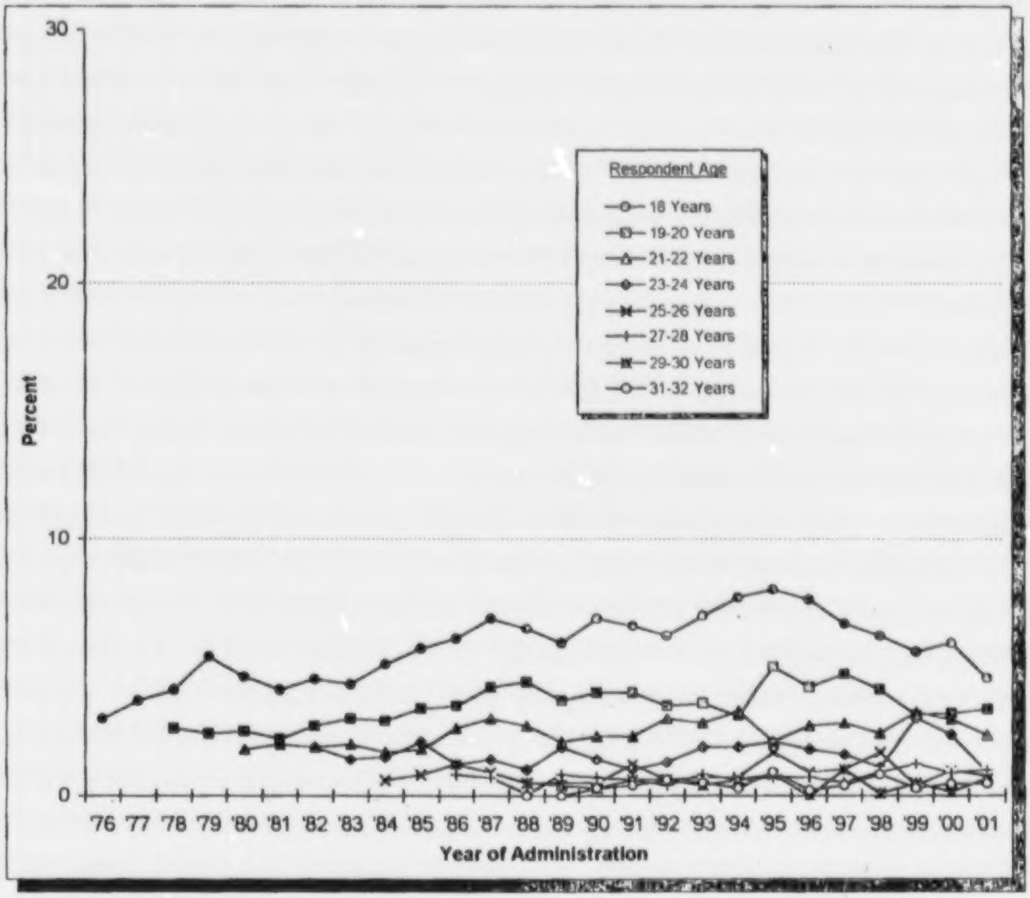


Age of Respondent	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01
18 Years	8.2	9.1	10.7	10.3	9.1	7.0	6.3	5.5	5.0	4.9	4.0	3.3	2.7	2.9	2.2	2.0	1.9	2.4	3.5	4.6	4.9	5.8	5.6	6.0	6.0	5.8
19-20 Years			10.5	10.9	8.1	7.9	6.6	5.2	4.7	4.6	3.5	3.4	3.5	2.8	2.3	2.1	1.4	2.3	3.1	4.7	4.9	5.4	5.2	6.2	6.0	6.1
21-22 Years					10.9	9.4	6.4	6.2	5.3	4.5	4.1	3.9	3.5	3.1	2.5	2.4	2.6	2.3	2.9	3.4	3.2	5.3	5.2	4.6	5.5	7.0
23-24 Years							8.1	6.7	5.5	5.8	4.9	4.3	3.1	3.0	2.7	2.1	2.3	2.7	3.1	3.3	2.3	2.6	3.1	5.1	3.8	4.7
25-26 Years									6.0	6.1	3.6	5.0	3.4	3.3	2.7	2.5	2.6	2.5	2.7	2.3	3.1	2.5	2.4	3.1	3.4	4.6
27-28 Years											4.8	4.6	3.0	4.1	2.4	2.6	2.5	2.3	2.2	2.5	2.5	2.7	2.3	2.8	2.0	2.3
29-30 Years													3.2	3.2	2.2	2.6	2.9	2.7	2.4	2.5	2.2	2.3	2.4	2.5	2.2	2.6
31-32 Years															2.2	2.5	2.1	2.6	2.7	3.1	2.8	2.8	2.8	2.1	2.6	2.9
35 Years																			2.3	2.6	2.3	3.5	2.7	1.9	2.7	2.3
40 Years																							3.2	2.1	2.6	1.8

FIGURE 5-4

Inhalants*: Trends in Annual Prevalence Among High School Seniors and Adults Through Age 40

by Age Group

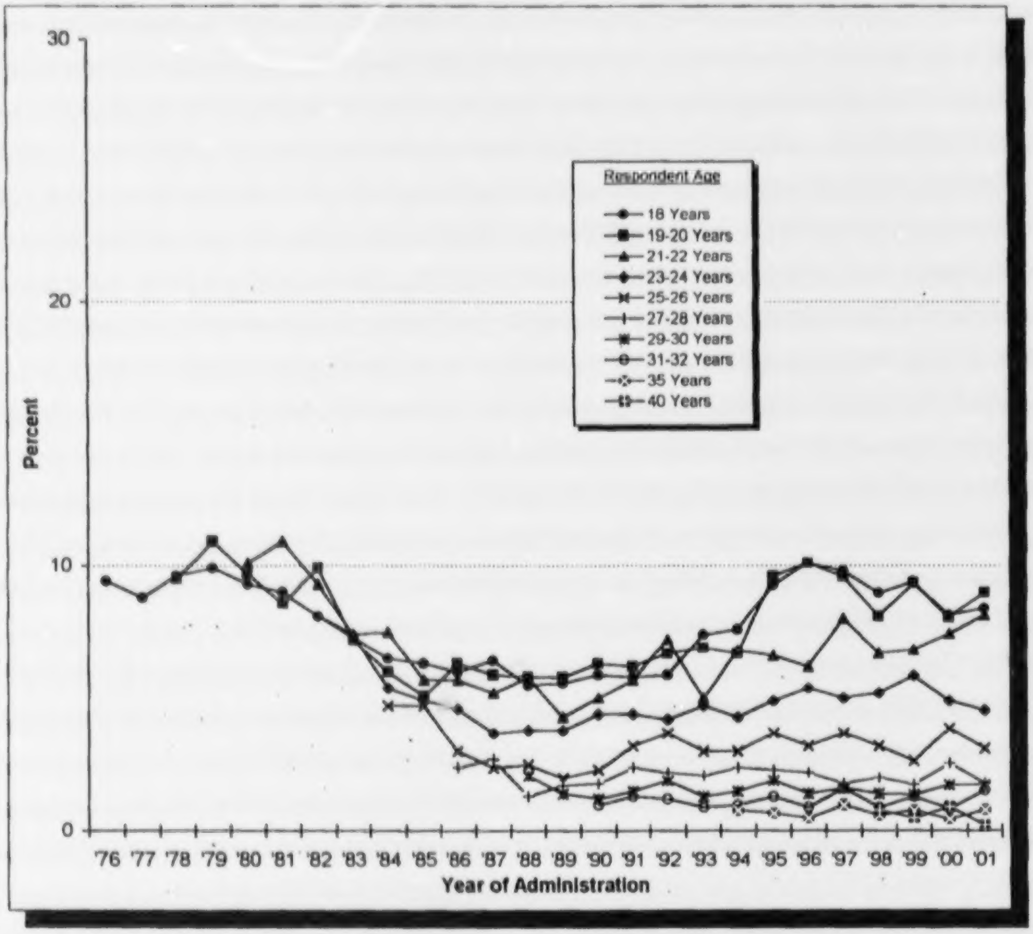


*Unadjusted for the possible underreporting of amyl and butyl nitrites. Chapter 5, Volume I, shows that such an adjustment would flatten the trend for seniors considerably because the line was adjusted up more in the earlier years, when nitrite use was more prevalent. Questions about nitrite use were dropped from the follow-up questionnaires beginning in 1995.

Age of Respondent	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01
18 Years	3.0	3.7	4.1	5.4	4.6	4.1	4.5	4.3	5.1	5.7	6.1	6.9	6.5	5.9	6.9	6.6	6.2	7.0	7.7	8.0	7.6	6.7	6.2	5.6	5.9	4.5
19-20 Years			2.6	2.4	2.5	2.2	2.7	3.0	2.9	3.4	3.5	4.2	4.4	3.7	4.0	4.0	3.5	3.6	3.1	5.0	4.2	4.7	4.1	3.1	3.2	3.4
21-22 Years					1.8	2.0	1.9	2.0	1.7	1.8	2.6	3.0	2.7	2.1	2.3	2.3	3.0	2.8	3.3	2.1	2.7	2.8	2.4	3.3	3.0	2.4
23-24 Years							1.9	1.4	1.5	2.1	1.2	1.4	1.0	1.9	1.4	1.0	1.3	1.9	1.9	2.1	1.8	1.6	1.1	3.0	2.4	0.9
25-26 Years									0.6	0.8	1.2	0.9	0.5	0.5	0.5	1.2	0.6	0.7	0.7	1.7	0.9	1.0	1.7	0.4	1.0	0.8
27-28 Years											0.8	0.7	0.1	0.8	0.7	0.6	0.4	0.8	0.6	0.7	0.7	0.5	0.9	1.2	0.9	1.0
29-30 Years													0.5	0.4	0.3	0.6	0.6	0.4	0.6	0.8	0.0	1.0	0.1	0.5	0.1	0.7
31-32 Years															0.3	0.4	0.6	0.5	0.3	0.9	0.2	0.4	0.8	0.3	0.5	0.5
35 Years																			–	–	–	–	–	–	–	–
40 Years																							–	–	–	–

BEST COPY AVAILABLE

FIGURE 5-5
Hallucinogens*: Trends in Annual Prevalence Among High School Seniors and Adults Through Age 40
by Age Group



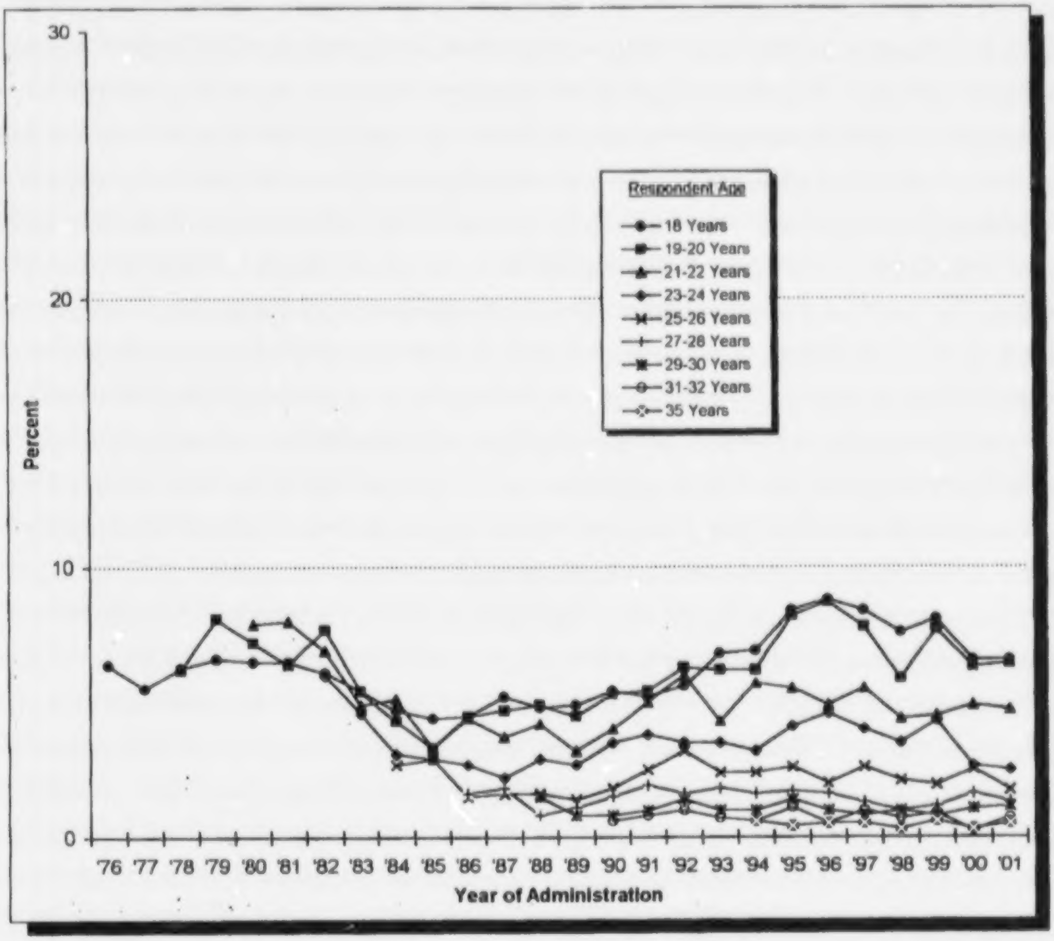
*Unadjusted for the possible underreporting of PCP

Age of Respondent	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01
18 Years	9.4	8.8	9.6	9.9	9.3	9.0	8.1	7.3	6.5	6.3	6.0	6.4	5.5	5.6	5.9	5.8	5.9	7.4	7.6	9.3	10.1	9.8	9.0	9.4	8.1	8.4
19-20 Years			9.5	10.9	9.7	8.6	9.9	7.2	6.0	5.1	6.3	5.9	5.8	5.8	6.3	6.2	6.7	6.9	6.7	9.6	10.1	9.6	8.1	9.4	8.0	9.0
21-22 Years					10.1	10.9	9.3	7.4	7.5	5.7	5.7	5.2	5.8	4.3	5.0	5.7	7.2	5.0	6.8	6.6	6.2	8.0	6.7	6.8	7.4	8.1
23-24 Years							8.1	7.4	5.4	4.9	4.6	3.7	3.8	3.8	4.4	4.4	4.2	4.7	4.3	4.9	5.4	5.0	5.2	5.9	4.9	4.6
25-26 Years									4.7	4.7	3.0	2.4	2.5	2.0	2.3	3.2	3.7	3.0	3.0	3.7	3.2	3.7	3.2	2.7	3.9	3.1
27-28 Years											2.4	2.7	1.3	1.7	1.8	2.4	2.2	2.1	2.4	2.3	2.2	1.8	2.0	1.7	2.6	1.8
29-30 Years													2.1	1.4	1.2	1.5	1.9	1.3	1.5	1.9	1.4	1.6	1.4	1.4	1.7	1.7
31-32 Years															1.0	1.3	1.2	0.9	1.0	1.3	0.9	1.6	0.9	1.3	0.9	1.5
35 Years																			0.8	0.7	0.5	1.0	0.6	0.8	0.5	0.8
40 Years																							0.8	0.5	0.9	0.2

FIGURE 5-6

LSD: Trends in Annual Prevalence Among High School Seniors and Adults Through Age 40

by Age Group

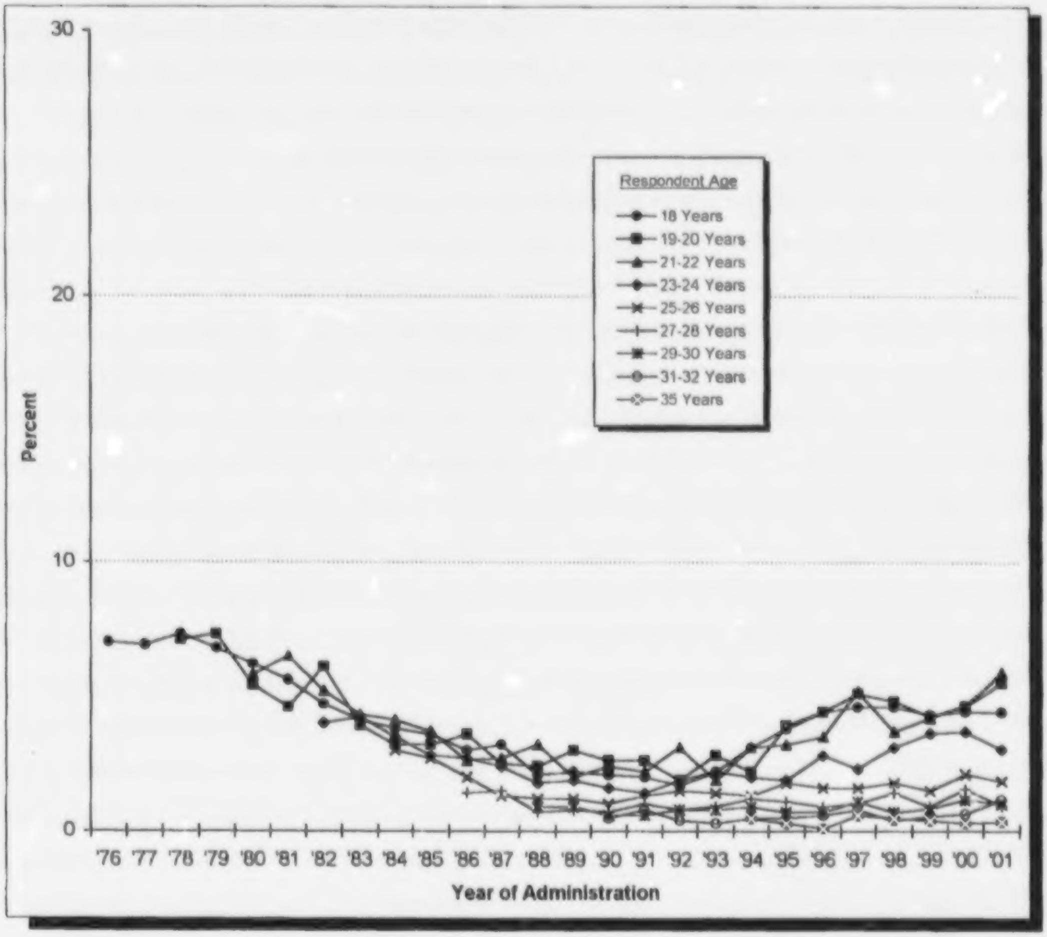


Age of Respondent	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01
18 Years	6.4	5.5	6.3	6.6	6.5	6.5	6.1	5.4	4.7	4.4	4.5	5.2	4.8	4.9	5.4	5.2	5.6	6.8	6.9	8.4	8.8	8.4	7.6	8.1	6.6	6.6
19-20 Years			6.2	8.1	7.2	6.4	7.7	5.4	4.3	3.3	4.5	4.7	4.9	4.5	5.3	5.4	6.3	6.2	6.2	8.2	8.7	7.8	5.9	7.7	6.3	6.4
21-22 Years					7.9	8.0	6.9	4.9	5.1	3.3	4.4	3.7	4.2	3.2	4.0	5.0	6.0	4.3	5.7	5.5	4.9	5.5	4.4	4.5	4.9	4.7
23-24 Years							6.0	4.6	3.1	2.9	2.7	2.2	2.9	2.7	3.5	3.8	3.5	3.5	3.2	4.1	4.6	4.0	3.5	4.3	2.6	2.5
25-26 Years									2.7	2.9	1.5	1.6	1.6	1.4	1.8	2.5	3.2	2.4	2.4	2.6	2.0	2.6	2.1	1.9	2.5	1.7
27-28 Years											1.6	1.8	0.8	1.1	1.5	1.9	1.6	1.8	1.6	1.7	1.6	1.3	1.0	1.2	1.6	1.3
29-30 Years													1.5	0.8	0.8	1.0	1.4	1.0	1.0	1.4	1.0	0.8	1.0	0.8	1.0	1.1
31-32 Years															0.6	0.8	1.0	0.7	0.6	1.1	0.5	1.0	0.7	0.9	0.2	0.7
35 Years																			0.6	0.4	0.5	0.5	0.3	0.6	0.3	0.5
40 Years																							-	-	-	-

FIGURE 5-7

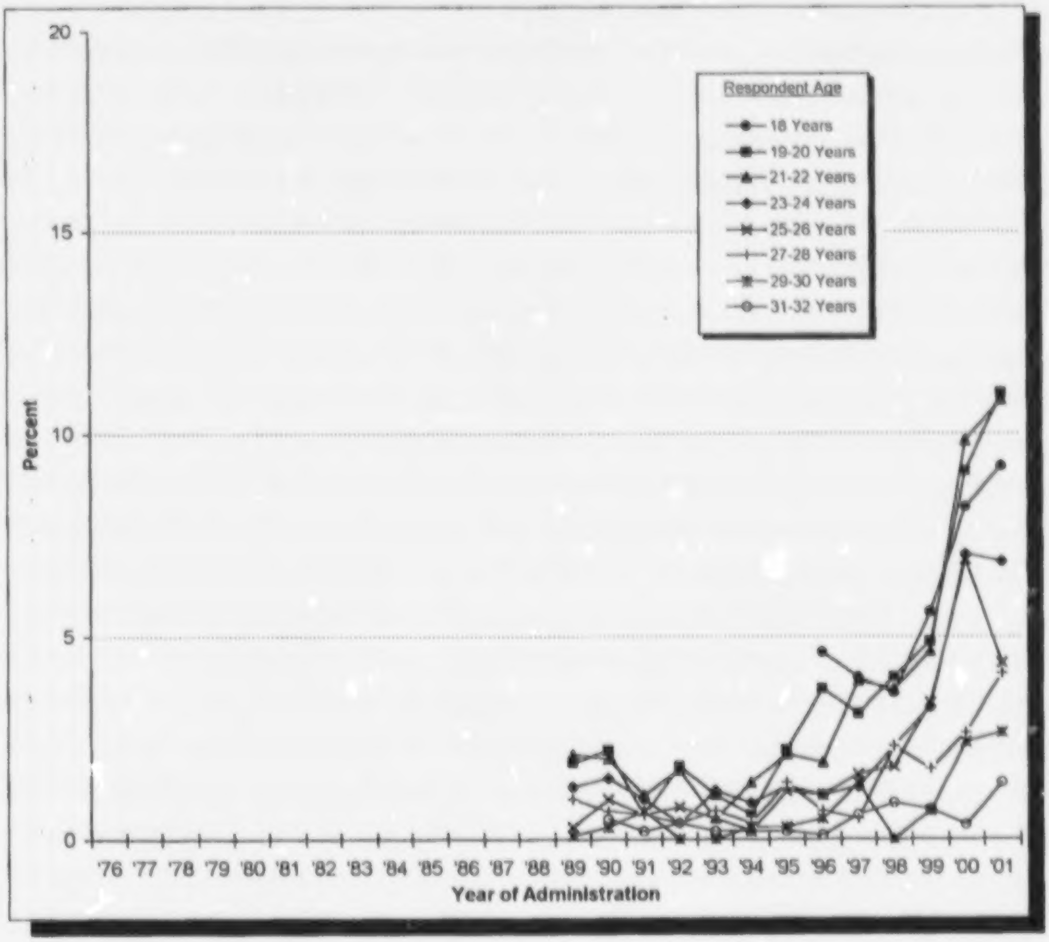
Hallucinogens Other than LSD: Trends in Annual Prevalence Among High School Seniors and Adults Through Age 40

by Age Group



Age of Respondent	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01
18 Years	7.0	6.9	7.3	6.8	6.2	5.6	4.7	4.1	3.8	3.6	3.0	3.2	2.1	2.2	2.1	2.0	1.7	2.2	3.1	3.8	4.4	4.6	4.6	4.3	4.4	4.4
19-20 Years			7.1	7.3	5.4	4.6	6.1	3.9	3.2	3.2	3.6	2.5	2.4	3.0	2.6	2.6	1.9	2.8	2.2	3.9	4.4	5.1	4.8	4.2	4.6	5.5
21-22 Years					5.8	6.5	5.2	4.3	4.1	3.7	2.6	2.7	3.2	2.0	2.4	2.2	3.1	1.9	3.1	3.2	3.5	5.2	3.7	4.2	4.7	5.9
23-24 Years							4.0	4.2	3.5	2.8	2.7	2.4	1.8	1.9	1.6	1.4	1.9	2.2	2.0	1.9	2.8	2.3	3.1	3.6	3.7	3.0
25-26 Years									3.0	2.7	2.0	1.3	1.2	1.2	1.0	1.3	1.5	1.4	1.3	1.8	1.6	1.6	1.8	1.5	2.1	1.9
27-28 Years											1.4	1.5	0.7	0.8	0.7	1.0	0.8	0.9	1.2	1.1	0.9	1.0	1.4	0.9	1.6	0.9
29-30 Years													0.9	0.9	0.6	0.6	0.8	0.8	0.9	0.7	0.7	1.1	0.7	0.8	1.1	1.0
31-32 Years															0.5	0.8	0.4	0.3	0.5	0.5	0.6	0.8	0.4	0.6	0.6	1.1
35 Years																			0.5	0.3	0.1	0.6	0.5	0.4	0.3	0.4
40 Years																							-	-	-	-

FIGURE 5-8
MDMA: Trends in Annual Prevalence Among High School Seniors and Adults Through Age 40
by Age Group

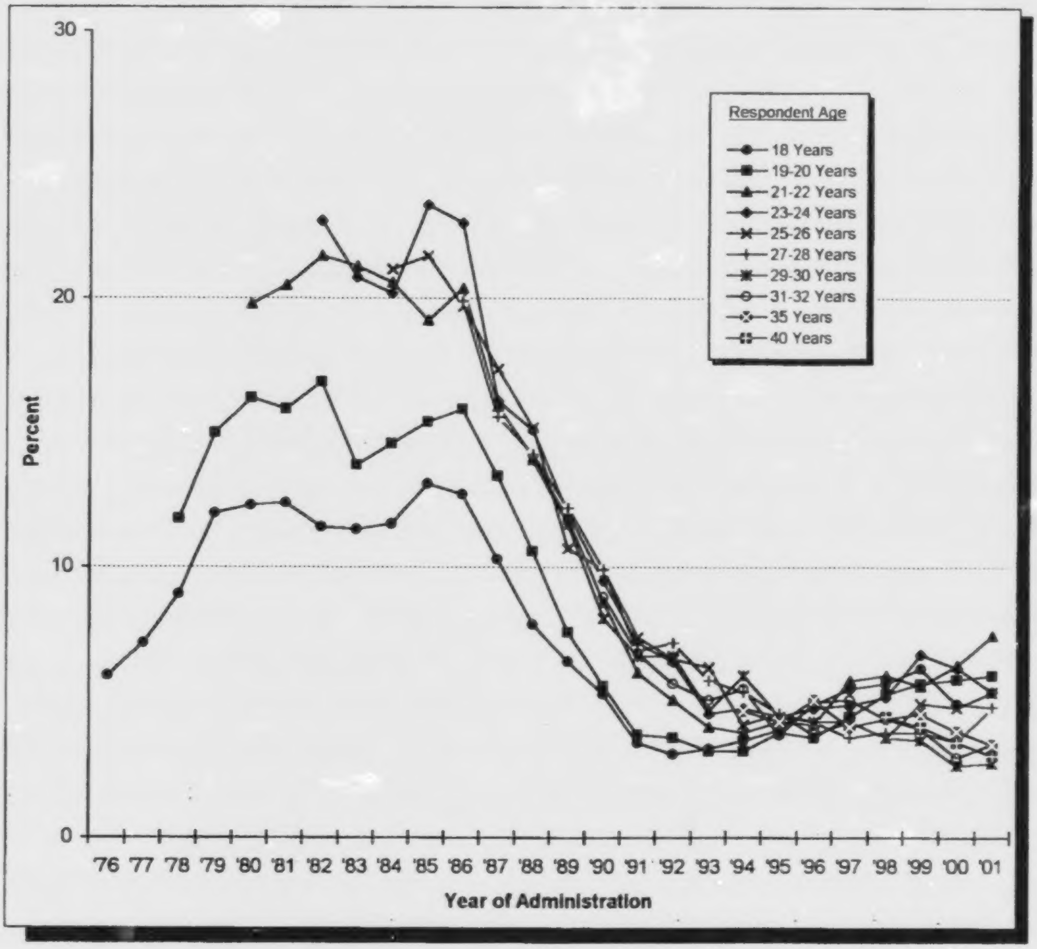


Age of Respondent	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01
18 Years																					4.6	4.0	3.6	5.6	8.2	9.2
19-20 Years														1.9	2.2	0.6	1.8	1.1	0.6	2.2	3.7	3.1	4.0	4.9	9.1	11.0
21-22 Years														2.1	2.0	1.1	1.7	0.5	1.4	2.1	1.9	3.9	3.7	4.6	9.8	10.8
23-24 Years														1.3	1.5	1.0	0.4	1.2	0.9	1.3	1.1	1.3	2.3	3.3	7.0	6.8
25-26 Years														0.3	1.0	0.6	0.8	0.5	0.2	1.2	1.1	1.6	1.8	3.4	6.9	4.3
27-28 Years														1.0	0.7	0.6	0.4	0.7	0.4	1.4	0.7	0.5	2.3	1.8	2.6	4.1
29-30 Years														0.1	0.3	0.7	0.0	0.0	0.3	0.3	0.5	1.4	0.0	0.7	2.4	2.6
31-32 Years															0.5	0.2	0.4	0.2	0.2	0.2	0.1	0.6	0.9	0.8	0.3	1.4
35 Years																			–	–	–	–	–	–	–	–
40 Years																							–	–	–	–

FIGURE 5-9

Cocaine: Trends in Annual Prevalence Among High School Seniors and Adults Through Age 40

by Age Group

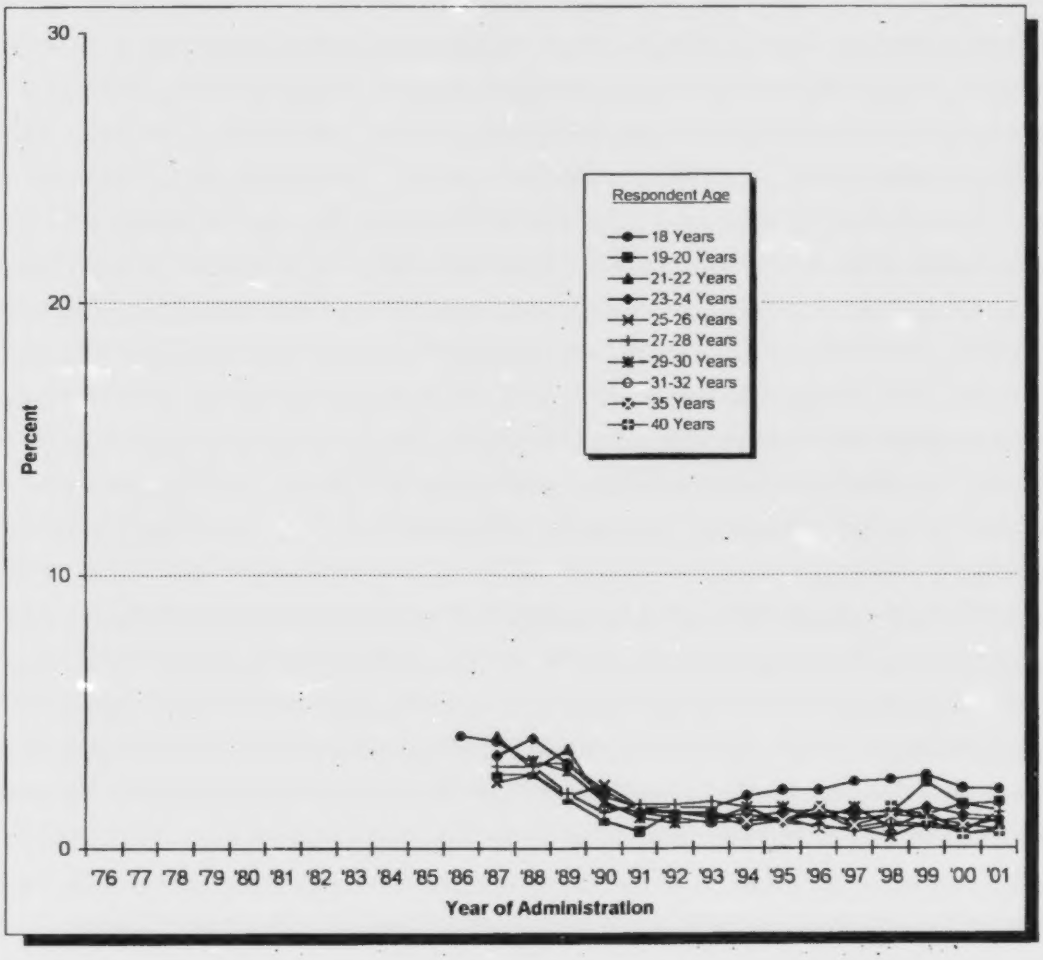


Age of Respondent	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01
18 Years	6.0	7.2	9.0	12.0	12.3	12.4	11.5	11.4	11.6	13.1	12.7	10.3	7.9	6.5	5.3	3.5	3.1	3.3	3.6	4.0	4.9	5.5	5.7	6.2	5.0	4.8
19-20 Years			11.8	15.0	16.3	15.9	16.9	13.8	14.6	15.4	15.9	13.4	10.6	7.6	5.6	3.8	3.7	3.2	3.2	3.9	3.7	4.5	5.3	5.7	5.8	6.0
21-22 Years					19.8	20.5	21.6	21.2	20.6	19.2	20.4	16.0	14.1	11.8	8.7	6.1	5.1	4.1	3.9	4.3	4.2	5.8	6.0	5.6	6.3	7.5
23-24 Years							22.9	20.8	20.2	23.5	22.8	16.2	15.1	12.0	9.5	7.2	6.5	4.6	4.8	4.5	4.8	4.9	5.2	6.8	6.3	5.4
25-26 Years									21.1	21.6	19.7	17.4	15.2	10.7	9.9	7.4	6.6	6.3	4.2	4.6	3.8	4.3	3.7	5.0	4.8	5.4
27-28 Years											19.9	15.6	14.2	12.2	9.9	6.9	7.2	5.8	5.4	4.6	4.3	3.7	3.9	3.9	3.6	4.8
29-30 Years													14.0	11.6	8.1	6.7	6.7	4.7	6.0	4.5	4.3	4.3	3.7	3.6	2.7	2.8
31-32 Years															8.9	6.8	5.7	5.1	5.5	3.8	5.0	5.1	4.4	4.1	3.0	3.5
35 Years																			4.7	4.3	5.1	4.1	4.4	4.6	3.9	3.5
40 Years																							4.5	4.1	3.5	3.0

FIGURE 5-10

Crack Cocaine: Trends in Annual Prevalence Among High School Seniors and Adults Through Age 40

by Age Group

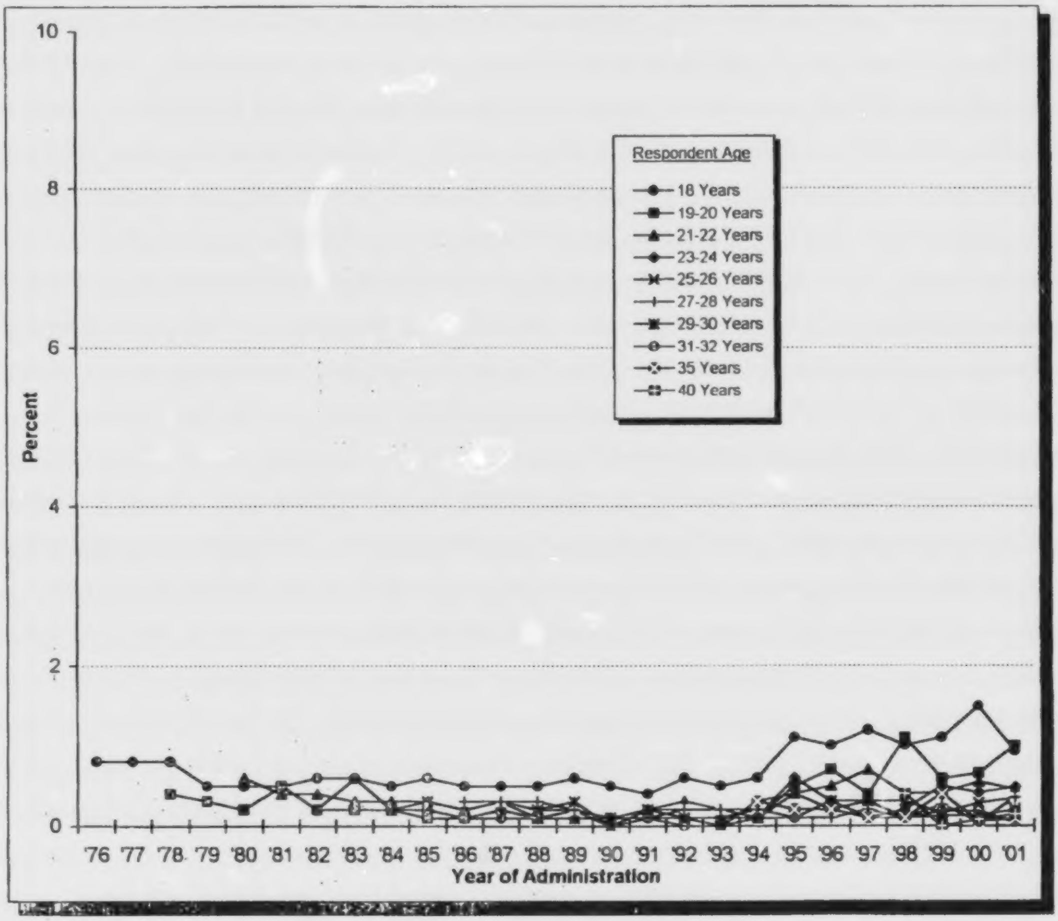


Age of Respondent	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01
18 Years											4.1	3.9	3.1	3.1	1.9	1.5	1.5	1.5	1.9	2.1	2.1	2.4	2.5	2.7	2.2	2.1
19-20 Years												2.7	2.7	1.8	1.0	0.6	1.3	1.2	1.2	1.0	1.3	1.3	1.3	2.4	1.6	1.7
21-22 Years												4.1	2.9	3.6	1.6	1.3	1.3	1.1	1.1	1.3	1.4	1.2	1.4	1.2	1.6	1.4
23-24 Years												3.4	4.0	3.1	2.1	1.4	1.3	1.2	0.8	1.0	1.2	1.0	1.2	1.5	1.2	1.1
25-26 Years												2.4	2.7	1.9	2.3	1.5	1.3	1.3	1.0	1.1	0.7	0.7	0.4	0.9	1.1	1.0
27-28 Years												3.0	3.0	2.0	1.3	1.6	1.6	1.7	1.5	0.9	0.8	0.6	0.8	0.8	0.6	1.3
29-30 Years													3.2	2.8	1.7	1.1	0.9	1.0	1.5	1.5	1.0	1.5	0.7	1.3	0.5	0.7
31-32 Years															1.5	1.3	1.1	0.9	1.0	1.0	1.3	0.7	0.9	0.8	0.7	1.0
35 Years																			1.0	1.0	1.5	0.8	1.2	1.1	0.8	0.7
40 Years																							1.5	1.0	0.5	0.6

FIGURE 5-11

Heroin: Trends in Annual Prevalence Among High School Seniors and Adults Through Age 40

by Age Group

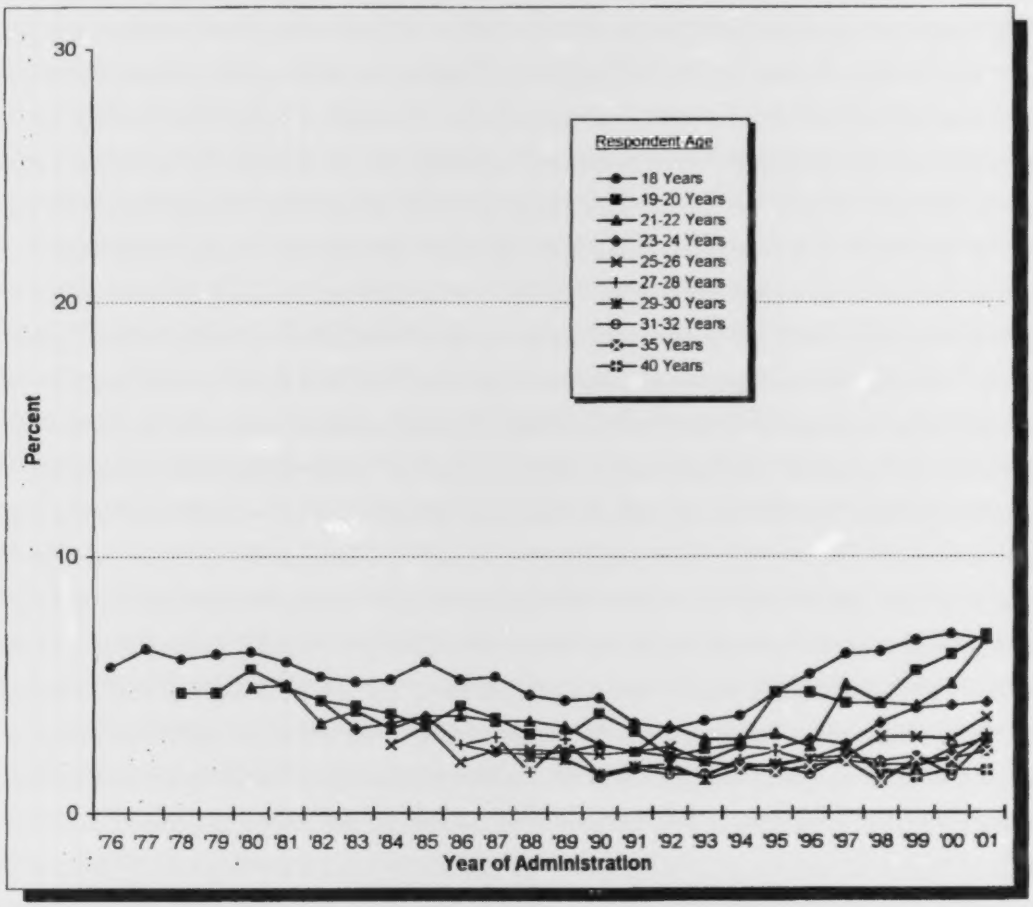


Age of Respondent	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01
18 Years	0.8	0.8	0.8	0.5	0.5	0.5	0.6	0.6	0.5	0.6	0.5	0.5	0.5	0.6	0.5	0.4	0.6	0.5	0.6	1.1	1.0	1.2	1.0	1.1	1.5	0.9
19-20 Years			0.4	0.3	0.2	0.5	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.0	0.1	0.1	0.1	0.1	0.5	0.7	0.4	1.1	0.6	0.7	1.0
21-22 Years					0.6	0.4	0.4	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.1	0.2	0.3	0.2	0.1	0.4	0.5	0.7	0.4	0.4	0.5	0.5
23-24 Years							0.2	0.6	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.6	0.3	0.1	0.2	0.5	0.4	0.5
25-26 Years									0.2	0.3	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.3	0.3	0.3	0.2	0.3	0.3
27-28 Years											0.3	0.3	0.3	0.2	0.0	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.3	0.1	0.3
29-30 Years													0.2	0.3	0.0	0.2	0.1	0.0	0.3	0.4	0.2	0.3	0.1	0.1	0.1	0.2
31-32 Years															0.1	0.1	0.0	0.0	0.1	0.1	0.3	0.3	0.1	0.2	0.2	0.0
35 Years																			0.3	0.2	0.2	0.1	0.1	0.4	0.1	0.1
40 Years																							0.4	0.0	0.1	0.1

FIGURE 5-12

Narcotics Other than Heroin: Trends in Annual Prevalence Among High School Seniors and Adults Through Age 40

by Age Group

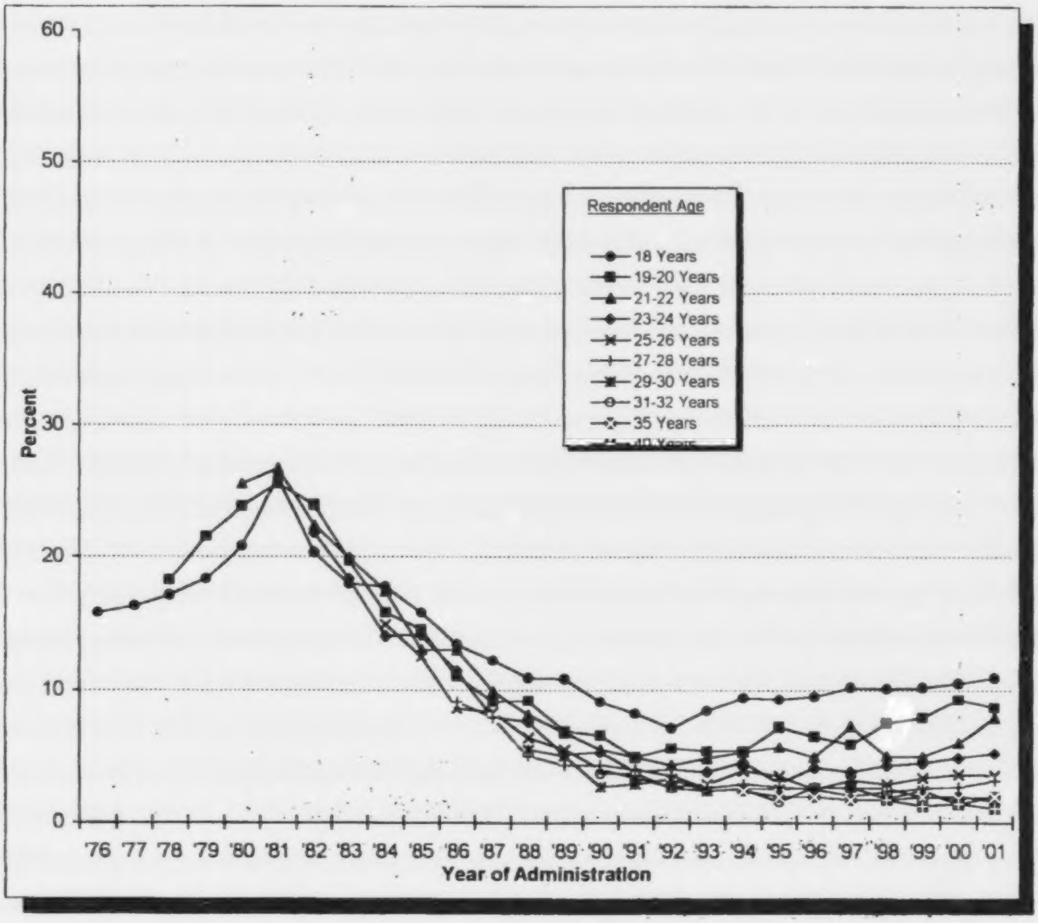


Age of Respondent	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01
18 Years	5.7	6.4	6.0	6.2	6.3	5.9	5.3	5.1	5.2	5.9	5.2	5.3	4.6	4.4	4.5	3.5	3.3	3.6	3.8	4.7	5.4	6.2	6.3	6.7	7.0	6.7
19-20 Years			4.7	4.7	5.6	4.9	4.4	4.2	3.9	3.4	4.2	3.7	3.1	3.0	3.9	3.2	2.2	2.5	2.7	4.7	4.7	4.3	4.3	5.5	6.2	7.0
21-22 Years					4.9	5.0	3.5	4.0	3.3	3.8	3.8	3.6	3.6	3.4	2.7	2.4	3.4	2.9	2.9	3.1	2.6	5.0	4.3	4.2	5.0	6.8
23-24 Years							4.4	3.3	3.5	3.8	2.7	2.4	2.3	2.4	2.7	2.4	2.2	2.0	2.6	2.5	2.9	2.7	3.5	4.1	4.2	4.3
25-26 Years									2.7	3.4	2.0	2.5	2.5	2.4	2.3	2.4	2.6	2.0	1.8	1.8	2.1	2.2	3.0	3.0	2.9	3.7
27-28 Years											2.7	3.0	1.6	2.9	1.5	1.8	1.7	1.4	2.1	2.4	2.0	2.0	1.9	1.8	2.1	3.1
29-30 Years													2.2	2.1	1.5	1.8	1.9	1.3	1.7	1.9	2.1	2.6	1.5	1.8	2.5	2.9
31-32 Years															1.4	1.7	1.5	1.5	1.9	1.8	1.5	2.2	2.0	2.2	1.4	2.9
35 Years																			1.7	1.6	1.8	2.0	1.2	2.1	2.1	2.4
40 Years																							1.7	1.4	1.7	1.6

FIGURE 5-13

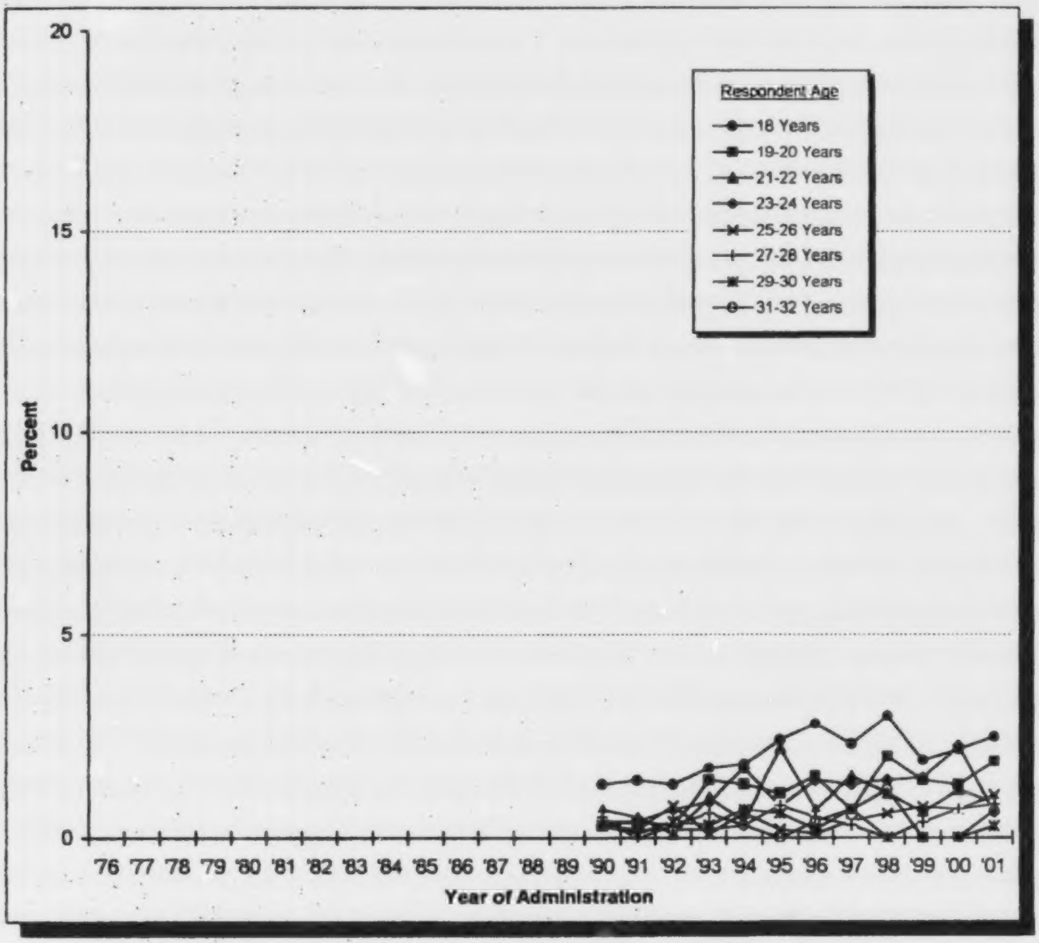
Amphetamines: Trends in Annual Prevalence Among High School Seniors and Adults Through Age 40

by Age Group



Age of Respondent	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01
18 Years	15.8	16.3	17.1	18.3	20.8	26.0	20.3	17.9	17.7	15.8	13.4	12.2	10.9	10.8	9.1	8.2	7.1	8.4	9.4	9.3	9.5	10.2	10.1	10.2	10.5	10.9
19-20 Years			18.2	21.5	23.8	25.5	23.9	19.7	15.8	14.5	11.0	9.1	9.2	6.9	6.6	4.9	5.6	5.4	5.4	7.2	6.5	5.9	7.5	7.9	9.3	8.7
21-22 Years					25.5	26.7	22.4	19.9	17.4	13.0	13.0	9.9	8.1	6.8	5.5	4.9	4.3	4.8	5.3	5.7	4.9	7.3	5.0	5.0	6.0	7.9
23-24 Years							21.8	18.3	14.0	14.1	11.4	7.9	7.6	5.1	5.3	3.8	4.0	3.8	4.5	3.0	4.1	3.8	4.3	4.5	4.8	5.2
25-26 Years									14.9	12.5	8.6	8.3	6.4	5.5	4.0	3.4	2.7	2.9	3.9	3.5	2.5	3.2	2.9	3.4	3.6	3.6
27-28 Years											9.1	7.9	5.0	4.3	4.3	4.0	3.5	2.6	2.9	2.7	2.5	2.0	2.3	2.6	2.7	3.2
29-30 Years													5.5	5.0	2.7	2.9	3.3	2.4	2.6	2.5	2.6	2.7	1.8	2.4	1.4	1.9
31-32 Years															3.7	3.7	2.6	2.4	2.5	1.5	2.7	2.6	2.6	1.9	1.9	1.5
35 Years																			2.4	1.9	1.9	1.7	1.7	1.9	1.8	1.9
40 Years																							1.7	1.2	1.4	1.0

FIGURE 5-14
Ice: Trends in Annual Prevalence Among High School Seniors and Adults Through Age 40
by Age Group

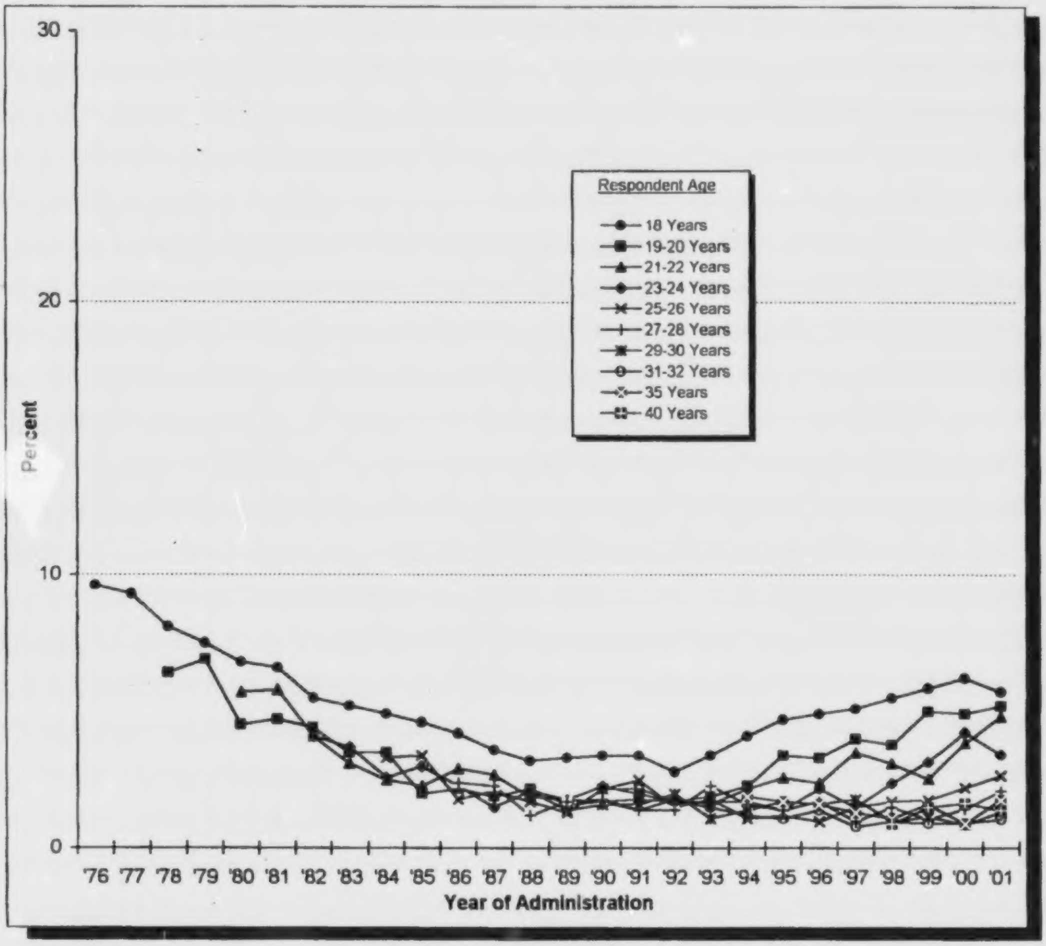


Age of Respondent	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01
18 Years															1.3	1.4	1.3	1.7	1.8	2.4	2.8	2.3	3.0	1.9	2.2	2.5
19-20 Years															0.3	0.4	0.3	1.4	1.3	1.1	1.5	0.7	2.0	1.4	1.3	1.9
21-22 Years															0.7	0.5	0.1	1.0	0.4	2.2	0.7	1.5	1.1	0.6	1.2	0.9
23-24 Years															0.4	0.4	0.7	0.9	1.7	0.8	1.4	1.3	1.4	1.5	2.3	0.6
25-26 Years															0.3	0.2	0.8	0.1	0.6	0.2	0.1	0.4	0.6	0.8	0.7	1.1
27-28 Years															0.5	0.0	0.3	0.6	0.3	0.8	0.5	0.3	0.0	0.4	0.7	0.8
29-30 Years															0.3	0.1	0.4	0.3	0.7	0.6	0.2	0.7	0.0	0.0	0.0	0.3
31-32 Years															0.3	0.2	0.2	0.2	0.3	0.0	0.4	0.7	1.2	0.0	0.0	0.7
35 Years																			–	–	–	–	–	–	–	–
40 Years																							–	–	–	–

FIGURE 5-15

Barbiturates: Trends in Annual Prevalence Among High School Seniors and Adults Through Age 40

by Age Group

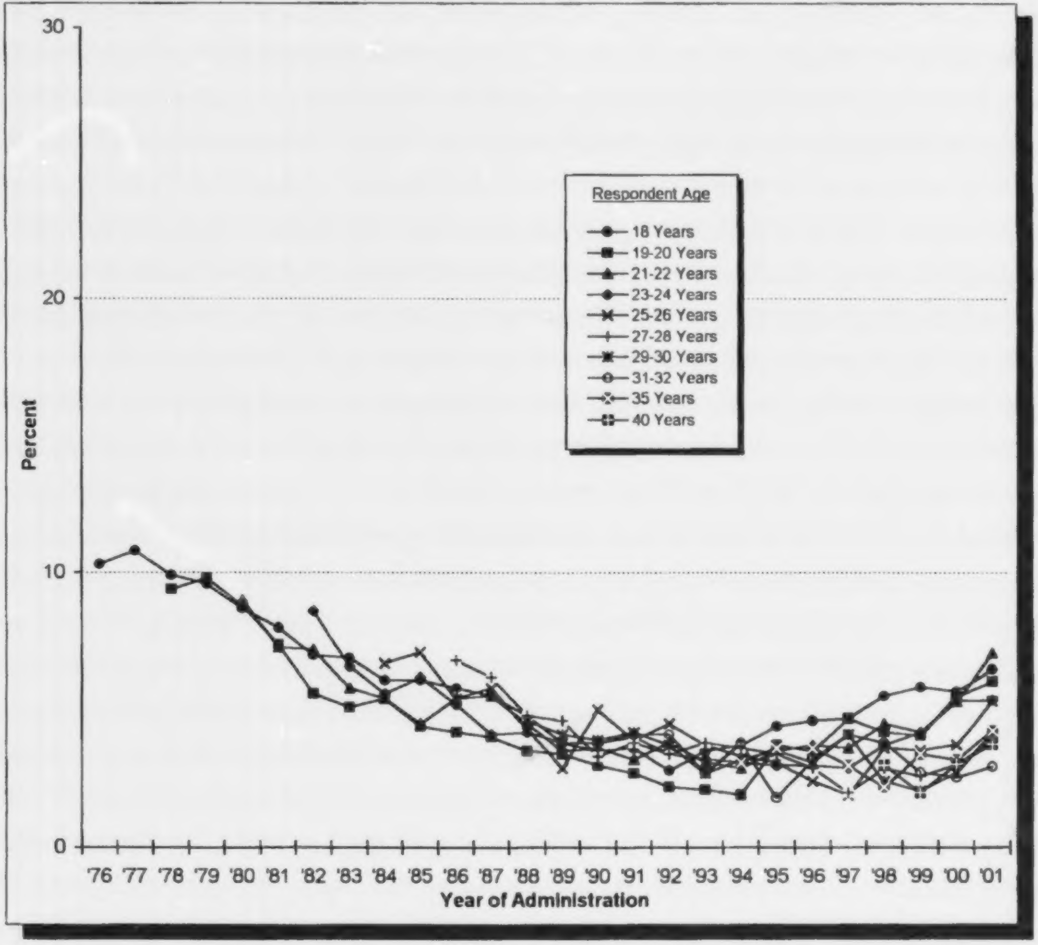


Age of Respondent	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01
18 Years	9.6	9.3	8.1	7.5	6.8	6.6	5.5	5.2	4.9	4.6	4.2	3.6	3.2	3.3	3.4	3.4	2.8	3.4	4.1	4.7	4.9	5.1	5.5	5.8	6.2	5.7
19-20 Years			6.4	6.9	4.5	4.7	4.4	3.5	3.5	2.0	2.2	1.9	2.2	1.6	1.7	1.8	1.7	1.9	2.3	3.4	3.3	4.0	3.8	5.0	4.9	5.2
21-22 Years					5.7	5.8	4.1	3.1	2.5	2.3	2.9	2.7	1.9	1.8	1.7	1.4	1.8	1.6	2.2	2.6	2.4	3.5	3.1	2.5	3.9	4.8
23-24 Years							4.1	3.7	2.6	3.0	2.3	1.5	2.1	1.8	2.3	2.0	1.7	1.7	1.7	1.4	2.2	1.5	2.4	3.2	4.3	3.4
25-26 Years									3.3	3.4	1.8	2.1	1.7	1.3	2.2	2.5	1.5	1.8	1.1	1.2	1.0	1.5	1.7	1.8	2.2	2.7
27-28 Years											2.4	2.3	1.2	1.7	1.8	1.4	1.4	2.3	1.6	1.4	1.7	1.0	1.5	1.1	1.4	2.1
29-30 Years													2.1	1.4	1.6	1.6	2.0	1.1	1.4	1.7	1.6	1.8	1.0	1.2	0.9	1.3
31-32 Years															2.2	2.2	1.7	1.5	1.2	1.1	1.4	0.8	1.0	0.9	0.9	1.1
35 Years																			1.9	1.7	1.6	1.3	1.1	1.6	0.9	1.8
40 Years																							0.9	1.5	1.6	1.4

FIGURE 5-16

Tranquilizers: Trends in Annual Prevalence Among High School Seniors and Adults Through Age 40

by Age Group

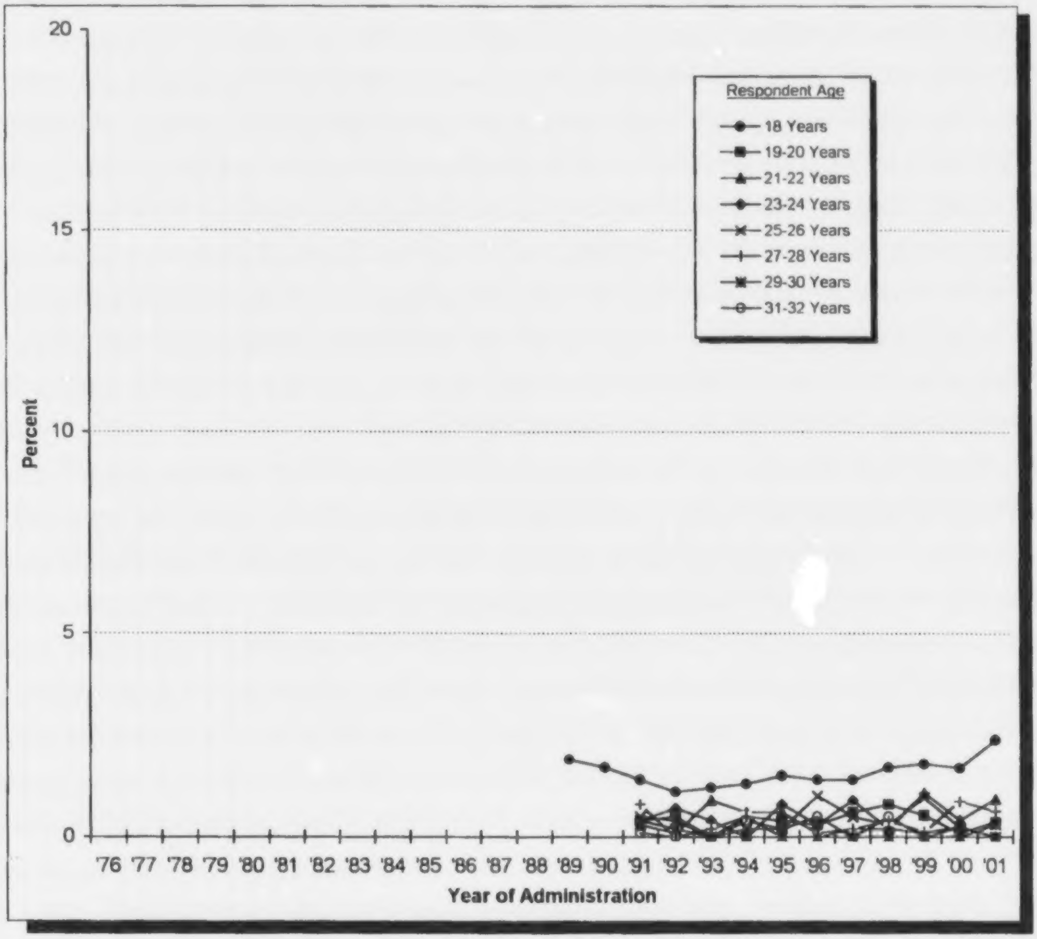


Age of Respondent	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01
18 Years	10.3	10.8	9.9	9.6	8.7	8.0	7.0	6.9	6.1	6.1	5.8	5.5	4.8	3.8	3.5	3.6	2.8	3.5	3.7	4.4	4.6	4.7	5.5	5.8	5.7	6.5
19-20 Years			9.4	9.8	8.8	7.4	5.6	5.1	5.4	4.4	4.2	4.0	3.5	3.4	3.0	2.7	2.2	2.1	1.9	3.7	3.5	4.7	4.2	4.1	5.5	6.1
21-22 Years					9.0	7.3	7.2	5.8	5.4	4.5	5.4	5.5	4.5	3.5	3.6	3.2	3.8	3.1	2.9	3.5	3.7	3.6	4.5	4.2	5.3	7.1
23-24 Years							8.6	6.6	5.6	6.2	5.2	4.1	4.2	3.8	3.8	4.0	3.4	3.2	3.1	3.0	3.0	2.9	3.7	4.2	5.3	5.4
25-26 Years									6.7	7.1	5.4	5.8	4.3	2.9	5.0	3.9	4.5	3.7	3.3	3.1	2.4	1.9	3.6	3.5	3.7	5.3
27-28 Years											6.8	6.2	4.8	4.6	3.3	3.8	3.4	3.8	3.6	3.4	2.9	2.0	2.9	2.6	3.0	3.9
29-30 Years													4.6	4.1	3.9	4.2	3.7	2.7	3.2	3.5	3.1	4.1	2.4	2.1	2.7	4.2
31-32 Years															3.8	4.1	4.1	2.7	3.8	1.8	3.2	4.1	3.8	2.7	2.6	3.0
35 Years																			3.1	3.6	3.6	3.0	2.2	3.4	3.2	4.3
40 Years																							3.0	2.0	3.0	3.7

FIGURE 5-17

Steroids: Trends in Annual Prevalence Among High School Seniors and Adults Through Age 40

by Age Group

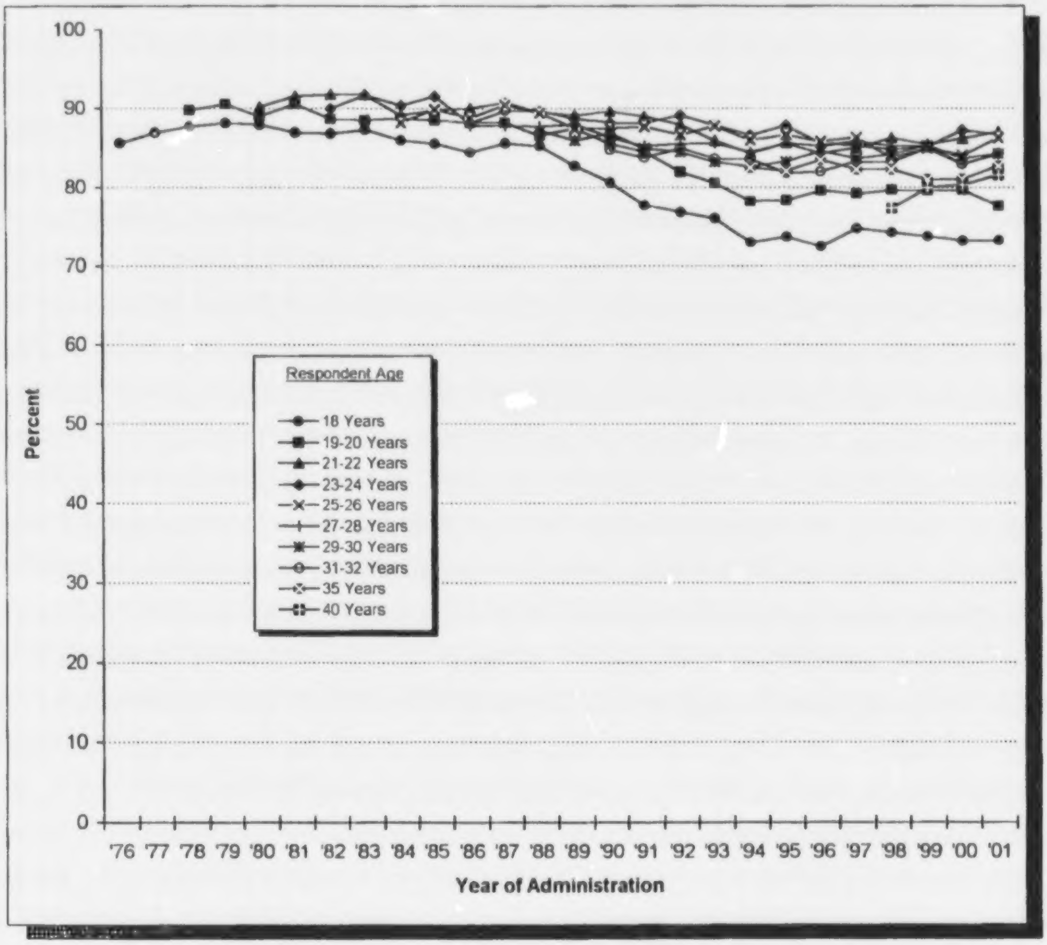


Age of Respondent	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01
18 Years														1.9	1.7	1.4	1.1	1.2	1.3	1.5	1.4	1.4	1.7	1.8	1.7	2.4
19-20 Years																0.4	0.5	0.0	0.5	0.4	0.3	0.6	0.8	0.5	0.1	0.4
21-22 Years																0.3	0.1	0.9	0.6	0.6	0.1	0.2	0.2	1.1	0.4	0.9
23-24 Years																0.4	0.7	0.4	0.0	0.8	0.3	0.9	0.2	0.1	0.3	0.0
25-26 Years																0.5	0.4	0.0	0.2	0.2	1.0	0.5	0.3	1.0	0.2	0.0
27-28 Years																0.8	0.0	0.2	0.5	0.0	0.0	0.2	0.4	0.1	0.9	0.6
29-30 Years																0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
31-32 Years																0.1	0.0	0.0	0.4	0.2	0.5	0.0	0.5	0.0	0.2	0.0
35 Years																			–	–	–	–	–	–	–	–
40 Years																							–	–	–	–

FIGURE 5-18a

Alcohol: Trends in Annual Prevalence Among High School Seniors and Adults Through Age 40

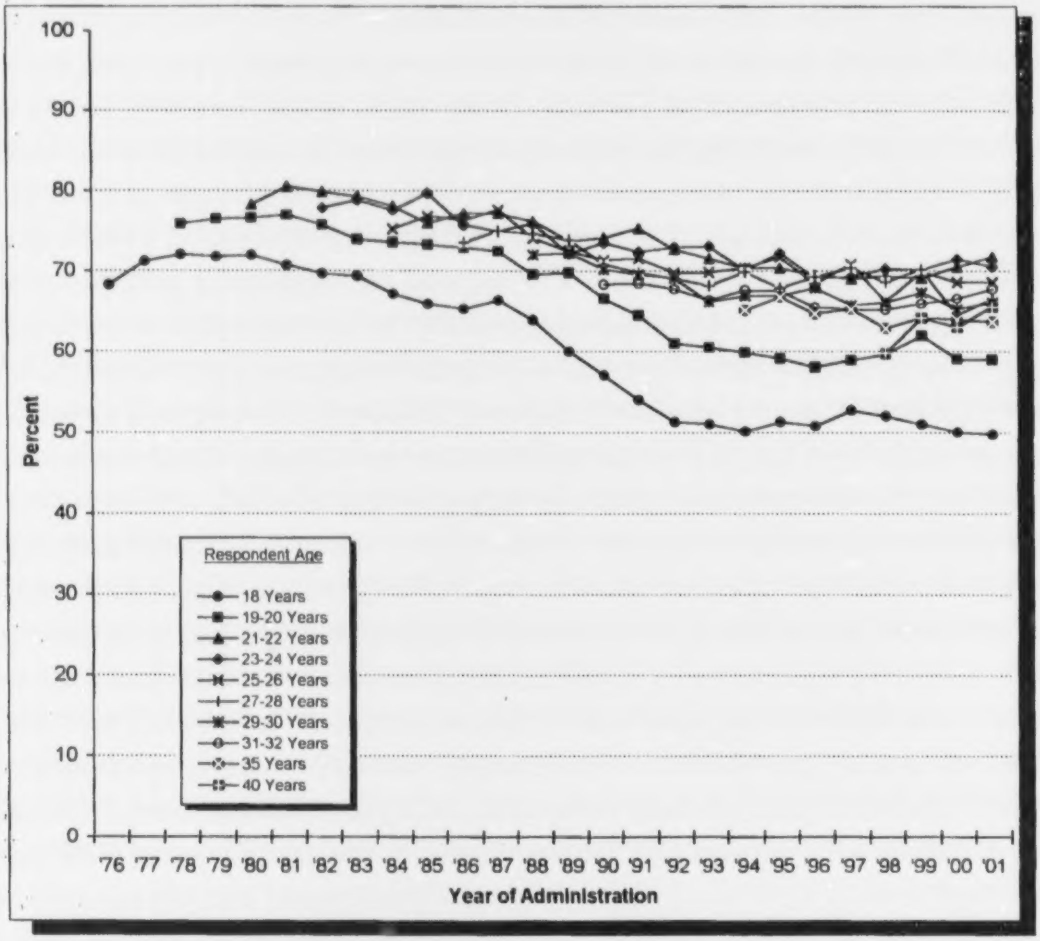
by Age Group



Age of Respondent	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01
18 Years	85.7	87.0	87.7	88.1	87.9	87.0	86.8	87.3	86.0	85.6	84.5	85.7	85.3	82.7	80.6	77.7	76.8	76.0	73.0	73.7	72.5	74.8	74.3	73.8	73.2	73.3
19-20 Years			89.8	90.6	89.0	90.6	88.6	88.5	88.7	88.5	88.2	88.2	86.6	87.5	85.6	84.6	81.9	80.6	78.2	78.3	79.6	79.2	79.7	79.6	79.7	77.6
21-22 Years					90.2	91.6	91.8	91.8	89.1	89.8	90.1	90.8	89.5	89.1	89.6	89.0	87.9	85.9	84.4	85.7	84.4	85.1	86.3	85.5	86.2	87.0
23-24 Years							90.0	91.7	90.4	91.6	88.1	89.7	89.7	88.7	88.2	88.1	89.1	87.8	86.6	87.8	85.7	85.4	84.9	85.2	87.2	86.7
25-26 Years									88.2	89.9	88.8	90.5	89.4	87.5	87.5	87.7	86.7	87.8	86.0	86.7	85.9	86.4	83.8	85.0	84.2	86.3
27-28 Years											87.8	87.8	87.7	88.0	86.4	85.3	85.6	85.7	84.5	85.7	85.3	85.9	85.3	85.4	82.9	84.2
29-30 Years													87.2	86.0	86.9	85.0	84.5	83.2	82.6	83.3	84.7	83.7	84.2	85.4	83.7	84.3
31-32 Years															84.8	83.8	85.0	83.6	83.6	81.8	82.0	83.3	83.2	85.1	82.9	84.4
35 Years																			82.5	82.1	83.5	82.3	82.3	81.0	81.0	82.7
40 Years																							77.3	80.0	80.3	81.5

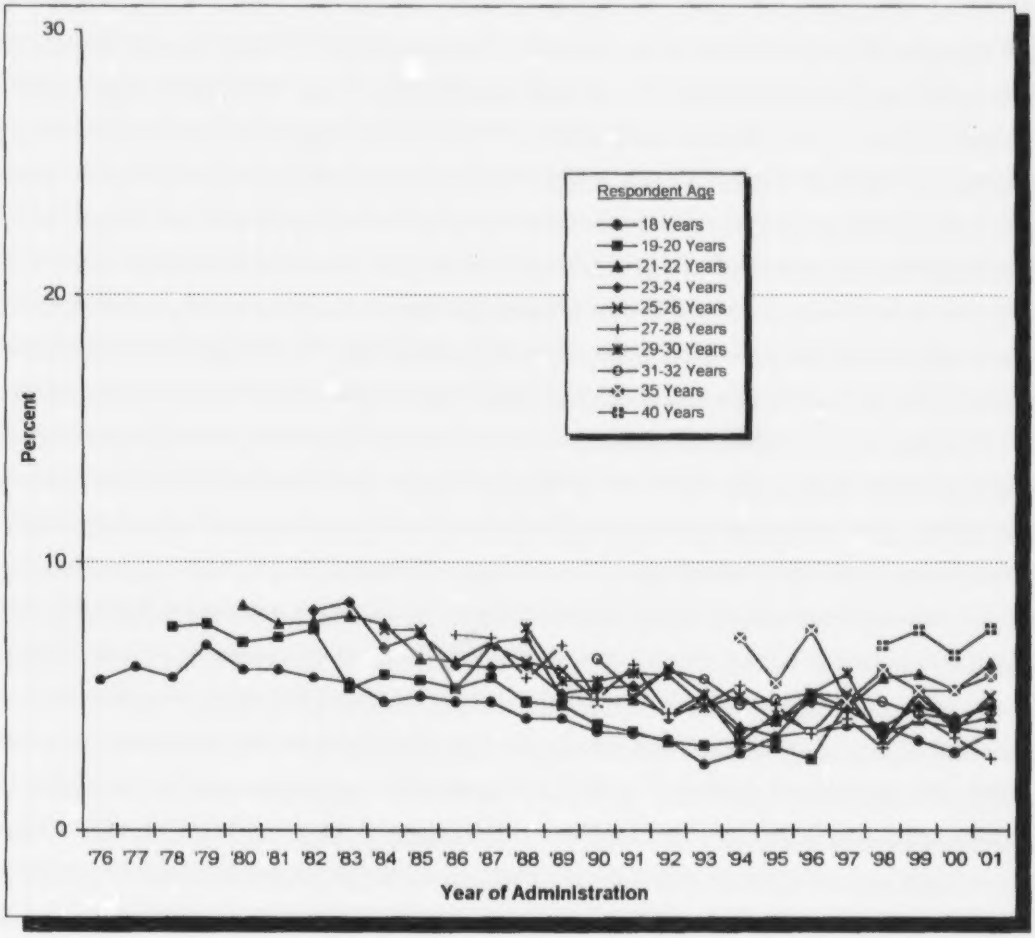
FIGURE 5-18b
Alcohol: Trends in Thirty-Day Prevalence Among High School Seniors and Adults Through Age 40

by Age Group



Age of Respondent	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01
18 Years	68.3	71.2	72.1	71.8	72.0	70.7	69.7	69.4	67.2	65.9	65.3	66.4	63.9	60.0	57.1	54.0	51.3	51.0	50.1	51.3	50.8	52.7	52.0	51.0	50.0	49.8
19-20 Years			75.8	76.5	76.6	77.0	75.7	73.9	73.6	73.3	72.9	72.5	69.6	69.8	66.6	64.5	61.0	60.5	59.9	59.2	58.1	59.0	59.7	62.0	59.1	59.0
21-22 Years					78.3	80.5	79.9	79.3	78.1	75.9	77.2	77.2	76.2	73.8	74.1	75.3	72.7	71.6	70.4	70.4	69.5	69.1	69.4	69.2	70.5	71.8
23-24 Years							77.9	78.9	77.6	79.7	75.7	74.9	75.9	72.2	73.6	72.4	73.0	73.1	70.1	72.3	69.2	69.3	70.3	70.2	71.5	70.6
25-26 Years									75.2	76.8	76.3	77.7	74.1	72.5	71.4	71.6	69.8	69.9	70.4	71.8	68.5	70.9	66.3	70.0	68.7	68.7
27-28 Years											73.6	75.0	74.6	73.9	70.9	69.8	69.1	68.3	69.9	68.0	69.3	70.4	68.7	70.2	64.6	66.5
29-30 Years													72.1	72.3	70.2	69.6	69.2	66.2	67.0	67.0	68.0	65.8	66.1	67.4	65.2	66.2
31-32 Years															68.4	68.5	67.8	66.4	67.7	67.6	65.5	65.3	65.2	66.0	66.7	67.8
35 Years																			65.1	66.8	64.7	65.3	62.9	64.2	64.0	63.7
40 Years																							59.8	64.2	63.1	65.6

FIGURE 5-18c
Alcohol: Trends in Thirty-Day Prevalence of Daily Use Among High School Seniors and Adults Through Age 40
by Age Group

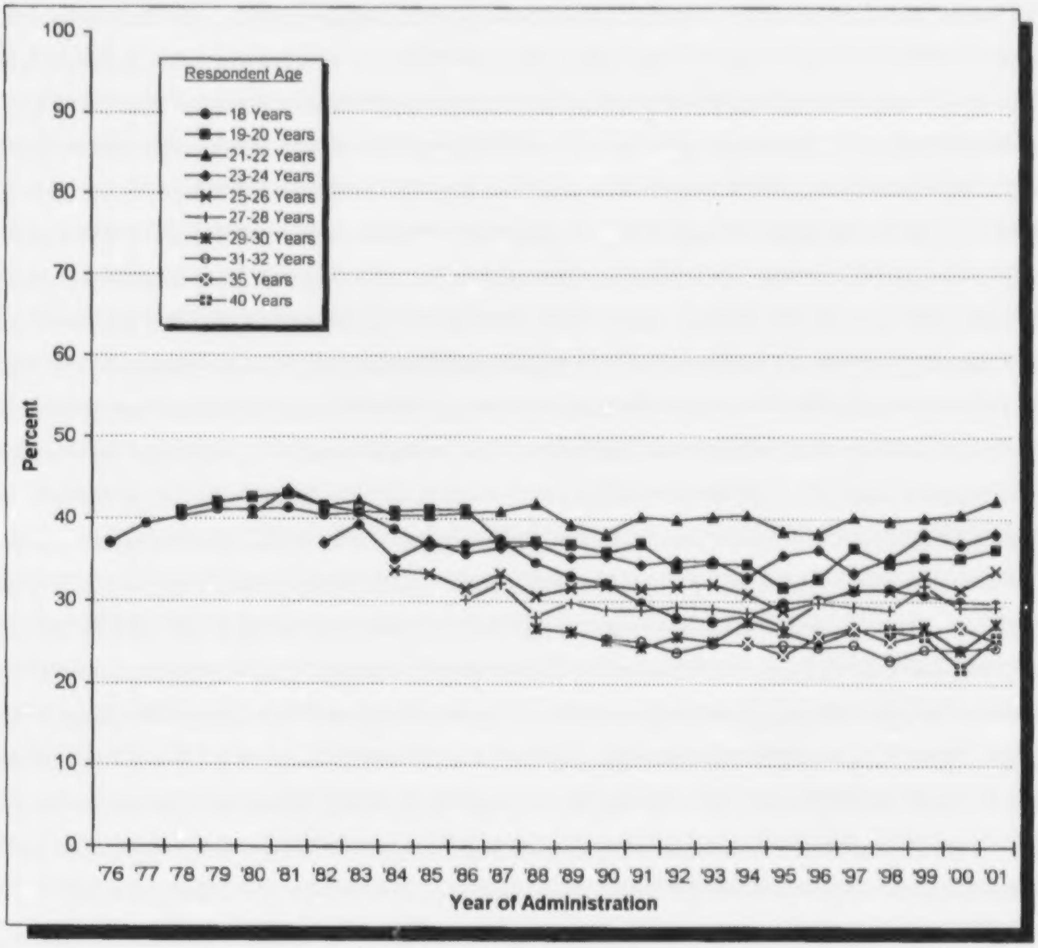


Age of Respondent	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01
18 Years	5.6	6.1	5.7	6.9	6.0	6.0	5.7	5.5	4.8	5.0	4.8	4.8	4.2	4.2	3.7	3.6	3.4	2.5	2.9	3.5	3.7	3.9	3.9	3.4	2.9	3.6
19-20 Years			7.6	7.7	7.0	7.2	7.5	5.3	5.8	5.6	5.3	5.7	4.8	4.7	4.0	3.7	3.3	3.2	3.3	3.1	2.7	4.8	3.6	4.1	3.9	3.6
21-22 Years					8.4	7.7	7.8	8.0	7.7	6.4	6.3	7.0	7.2	5.0	4.9	4.9	4.4	5.1	3.9	3.5	5.1	4.6	5.7	5.9	5.3	6.2
23-24 Years							8.2	8.5	6.8	7.3	6.2	6.1	6.2	5.1	5.3	5.4	4.2	4.9	3.7	4.1	4.8	4.5	3.9	4.7	4.2	4.6
25-26 Years									7.5	7.5	5.3	6.9	6.3	6.0	4.8	4.9	6.1	5.1	3.3	4.4	3.7	5.1	3.4	5.1	3.8	5.0
27-28 Years											7.3	7.2	5.7	6.9	4.9	6.2	4.4	4.7	5.4	4.7	3.6	4.2	3.1	4.3	3.5	2.7
29-30 Years													7.6	5.6	5.6	5.9	5.8	4.6	5.0	4.1	5.1	5.9	3.4	5.2	3.9	4.3
31-32 Years															6.4	5.2	6.0	5.7	4.7	4.9	5.1	5.0	4.8	4.4	4.2	4.7
35 Years																			7.2	5.5	7.5	4.8	6.0	5.2	5.2	5.8
40 Years																							6.9	7.5	6.5	7.5

FIGURE 5-18d

Alcohol: Trends in Two-Week Prevalence of Having Five or More Drinks in a Row at Least Once Among High School Seniors and Adults Through Age 40

by Age Group

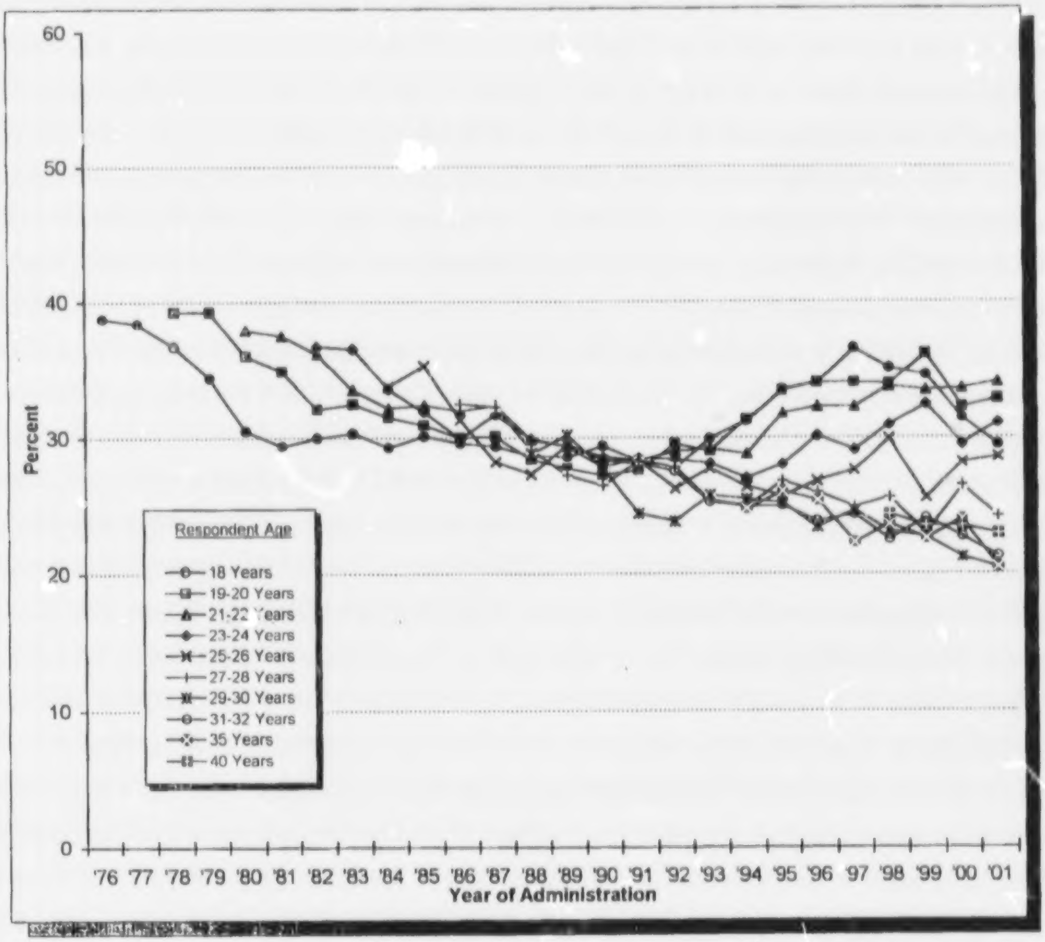


Age of Respondent	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01
18 Years	37.1	39.4	40.3	41.2	41.2	41.4	40.5	40.8	38.7	36.7	36.8	37.5	34.7	33.0	32.2	29.8	27.9	27.5	28.2	29.8	30.2	31.3	31.5	30.8	30.0	29.7
19-20 Years			41.1	42.1	42.7	43.1	41.7	40.9	41.0	41.2	41.2	37.2	37.3	36.9	36.0	37.0	34.0	34.6	34.5	31.7	32.7	36.5	34.5	35.3	35.3	36.3
21-22 Years					40.7	43.6	41.6	42.3	40.4	40.4	40.8	41.0	42.0	39.3	38.1	40.3	39.9	40.3	40.5	38.5	38.2	40.2	39.7	40.2	40.6	42.4
23-24 Years							37.1	39.3	35.1	37.3	35.8	36.6	37.0	35.4	35.5	34.4	34.9	35.0	32.9	35.6	36.3	33.4	35.3	38.1	37.0	38.2
25-26 Years									33.7	33.3	31.5	33.3	30.7	31.7	32.0	31.5	31.8	32.1	30.9	28.7	30.0	31.5	31.3	33.0	31.5	33.7
27-28 Years											30.1	32.2	28.0	29.8	28.9	28.8	29.2	29.0	28.5	26.9	29.7	29.3	28.9	32.0	29.1	29.2
29-30 Years													26.7	26.3	25.2	24.3	25.7	25.1	27.5	26.3	24.9	26.5	26.6	26.9	24.0	27.3
31-32 Years															25.4	25.1	23.7	24.8	24.6	24.7	24.3	24.7	22.8	24.1	24.1	24.3
35 Years																			25.0	23.4	25.7	26.8	25.1	26.1	26.8	25.1
40 Years																							26.4	25.8	21.9	25.6

FIGURE 5-19a

Cigarettes: Trends in Thirty-Day Prevalence Among High School Seniors and Adults Through Age 40

by Age Group

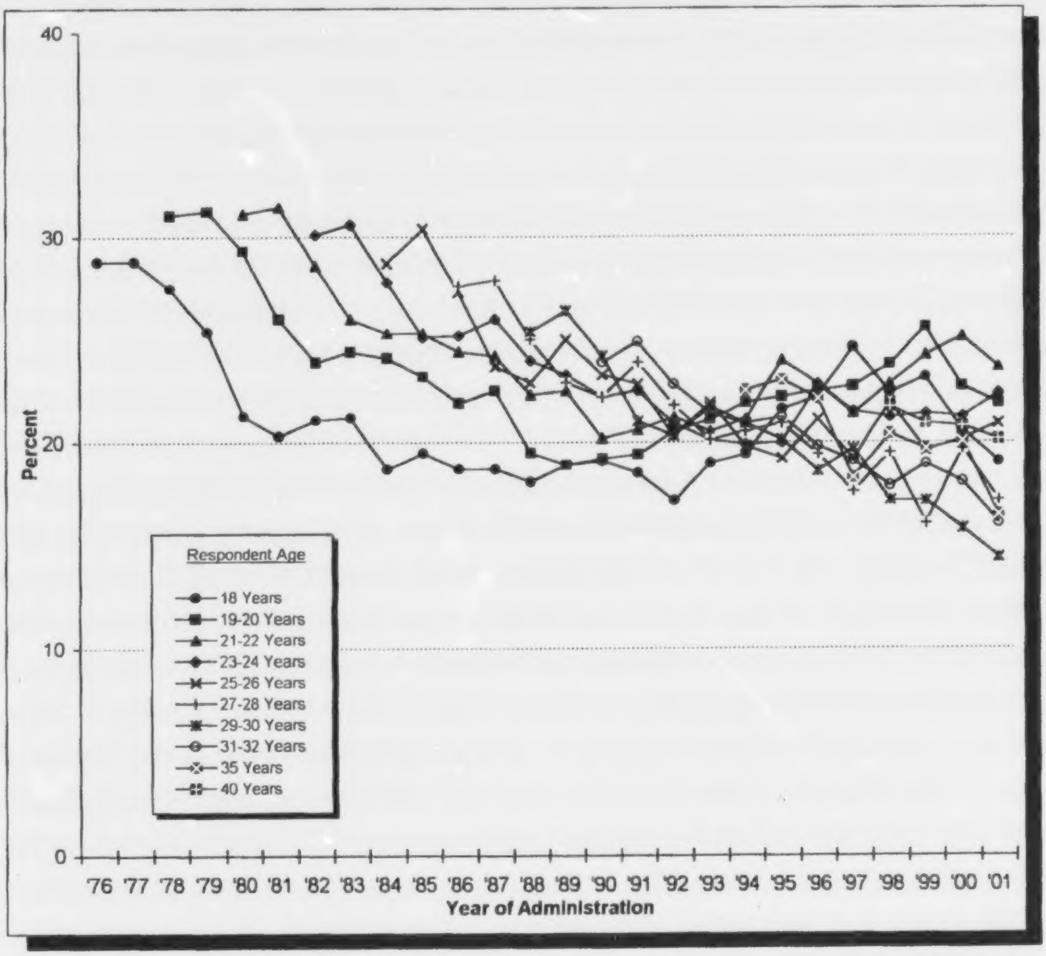


Age of Respondent	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01
18 Years	38.8	38.4	36.7	34.4	30.5	29.4	30.0	30.3	29.3	30.1	29.6	29.4	28.7	28.6	29.4	28.3	27.8	29.9	31.2	33.5	34.0	36.5	35.1	34.6	31.4	29.5
19-20 Years			39.3	39.3	36.0	34.9	32.1	32.5	31.5	30.9	30.0	30.1	28.4	27.7	27.2	27.6	29.5	29.0	31.3	33.4	34.0	34.0	33.9	36.1	32.2	32.8
21-22 Years					37.9	37.5	36.2	33.5	32.2	32.4	32.0	32.4	29.8	29.4	28.6	28.3	29.0	29.2	28.8	31.8	32.3	32.3	33.7	33.4	33.6	34.0
23-24 Years							36.7	36.5	33.6	31.9	29.9	31.7	29.9	29.4	27.8	28.5	28.4	28.1	27.0	28.0	30.1	29.1	30.9	32.4	29.5	31.1
25-26 Years									33.7	35.3	31.3	28.2	27.3	29.5	28.4	28.3	26.3	27.7	26.4	25.7	26.8	27.6	29.9	25.6	28.2	28.6
27-28 Years											32.5	32.3	29.1	27.2	26.5	28.2	27.8	25.4	25.0	26.8	26.0	24.9	25.6	22.9	26.5	24.2
29-30 Years													28.9	30.2	27.8	24.4	23.8	25.8	25.5	25.2	23.4	24.6	23.1	22.7	21.2	20.4
31-32 Years															28.3	28.1	27.5	25.3	24.9	25.0	23.8	24.3	22.5	24.0	22.7	21.2
35 Years																			24.8	26.1	25.4	22.3	23.6	22.6	24.0	20.5
40 Years																							24.3	23.5	23.5	22.9

FIGURE 5-19b

Cigarettes: Trends in Thirty-Day Prevalence of Daily Use Among High School Seniors and Adults Through Age 40

by Age Group

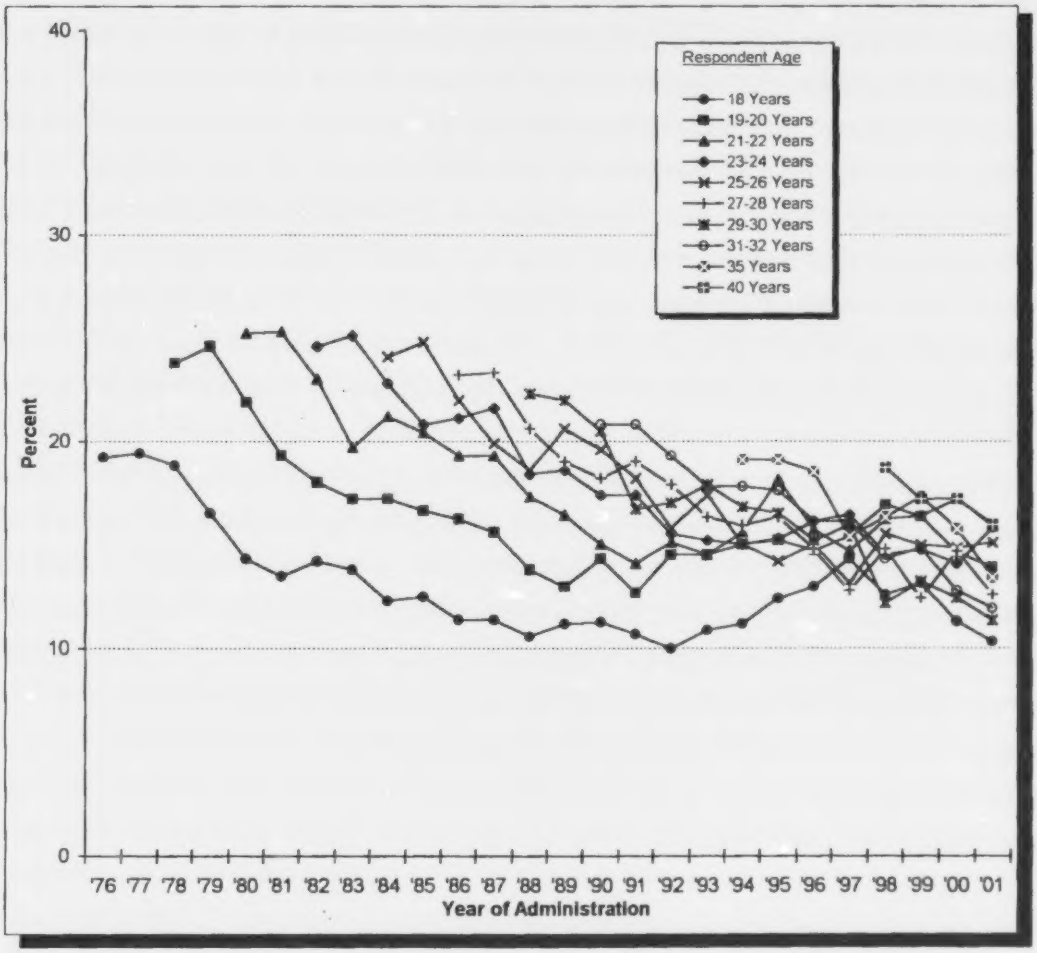


Age of Respondent	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01
18 Years	28.8	28.8	27.5	25.4	21.3	20.3	21.1	21.2	18.7	19.5	18.7	18.7	18.1	18.9	19.1	18.5	17.2	19.0	19.4	21.6	22.2	24.6	22.4	23.1	20.6	19.0
19-20 Years			31.0	31.2	29.3	26.0	23.9	24.4	24.1	23.2	21.9	22.5	19.5	18.9	19.2	19.4	20.5	21.1	21.9	22.2	22.5	22.7	23.8	25.6	22.7	21.9
21-22 Years					31.1	31.4	28.6	26.0	25.3	25.3	24.4	24.2	22.3	22.5	20.2	20.6	21.2	20.5	21.1	24.0	22.8	21.4	22.8	24.2	25.1	23.6
23-24 Years							30.1	30.6	27.8	25.1	25.2	26.0	24.0	23.3	22.2	22.5	20.9	20.1	19.9	20.0	22.8	21.5	21.2	21.4	21.2	22.4
25-26 Years									28.7	30.4	27.3	23.7	22.9	25.0	23.3	22.8	20.3	21.9	19.8	19.2	21.1	19.2	21.9	19.6	20.1	20.9
27-28 Years											27.6	27.9	25.0	22.9	22.2	23.9	21.8	20.1	20.5	20.9	19.4	17.6	19.5	16.0	19.7	17.2
29-30 Years													25.4	26.4	24.2	21.0	20.3	21.7	20.9	20.1	18.6	19.7	17.2	17.2	15.8	14.4
31-32 Years															23.9	24.9	22.8	21.4	20.9	21.2	19.8	19.1	17.9	18.9	18.1	16.1
35 Years																			22.5	23.0	22.1	18.3	20.4	19.7	20.1	16.5
40 Years																							21.7	20.9	20.8	20.2

FIGURE 5-19c

Cigarettes: Trends in Thirty-Day Prevalence of Smoking a Half-Pack or More Daily Among High School Seniors and Adults Through Age 40

by Age Group



Age of Respondent	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01
18 Years	19.2	19.4	18.8	16.5	14.3	13.5	14.2	13.8	12.3	12.5	11.4	11.4	10.6	11.2	11.3	10.7	10.0	10.9	11.2	12.4	13.0	14.3	12.6	13.2	11.3	10.3
19-20 Years			23.8	24.6	21.9	19.3	18.0	17.2	17.2	16.6	16.2	15.6	13.8	13.0	14.3	12.7	14.5	14.5	15.0	15.2	14.7	15.4	16.9	16.3	14.6	13.9
21-22 Years					25.2	25.3	23.0	19.7	21.2	20.4	19.3	19.3	17.3	16.4	15.0	14.1	15.1	14.5	15.6	18.1	15.7	14.7	16.2	16.4	17.2	15.9
23-24 Years							24.6	25.1	22.8	20.8	21.1	21.6	18.4	18.6	17.4	17.4	15.5	15.2	15.0	15.3	16.1	16.4	14.5	14.8	14.1	15.8
25-26 Years									24.1	24.8	22.0	19.9	18.6	20.6	19.6	18.2	15.8	17.4	15.0	14.2	15.0	13.2	15.5	15.0	14.8	15.1
27-28 Years											23.2	23.3	20.6	19.0	18.2	19.0	17.9	16.3	15.9	16.3	14.8	12.8	14.8	12.4	14.7	12.6
29-30 Years													22.3	22.0	20.5	16.7	17.0	17.9	16.8	16.5	15.2	15.9	12.2	13.2	12.5	11.4
31-32 Years															20.8	20.8	19.3	17.8	17.8	17.6	16.1	16.1	14.3	14.8	12.8	11.9
35 Years																			19.1	19.1	18.5	15.4	16.3	17.3	15.7	13.4
40 Years																							18.7	17.2	17.2	15.9

Chapter 6

ATTITUDES AND BELIEFS ABOUT DRUGS AMONG YOUNG ADULTS

As is documented at length in Volume I of this monograph, and in a number of articles and chapters from the study, we have observed over the past twenty-six years substantial changes in twelfth graders' attitudes and beliefs about the use of drugs. In particular, there have been large changes in the perceived risk of harm associated with marijuana and cocaine, as well as personal disapproval of use of marijuana, cocaine, and amphetamines. Further, the importance of these shifts in attitudes and beliefs in explaining changes in actual drug-using behavior has been demonstrated in many of the earlier volumes in this series and elsewhere.[30] In this chapter, we review trends since 1980 in the same attitudes and beliefs among the young adult samples.

PERCEIVED HARMFULNESS OF DRUGS

Table 6-1 provides trends in the perceived level of risk associated with differing usage levels of various licit and illicit drugs. These questions are contained in one questionnaire form only, limiting the numbers of follow-up cases; accordingly, we use four-year age bands in order to increase the available sample size (to about 400–600 weighted cases per year for each age band) and, thus, to improve the reliability of the estimates. (The numbers of cases are given at the end of Table 6-1.) Still, these are small sample sizes compared to those available for eighth, tenth, and twelfth graders, and the change estimates are thus more labile. Because of the nature of the Monitoring the Future design, trend data are available for a longer period for 19- to 22-year-olds (since 1980) than for 23- to 26-year-olds (since 1984) or for 27- to 30-year-olds (since 1988). Also displayed in this table are comparison data for twelfth graders, shown here as 18-year-olds, from 1980 onward. (See also Table 8-2 in Chapter 8 of Volume I for the longer-term trends in seniors' levels of perceived risk.)

- Table 6-1 illustrates considerable differences in the degree of risk young adults associate with various drugs. In general, the results closely parallel the distinctions made by seniors.

---

[30] Bachman, J. G., Johnston, L. D., O'Malley, P. M., & Humphrey, R. H. (1988). Explaining the recent decline in marijuana use: Differentiating the effects of perceived risks, disapproval, and general lifestyle factors. *Journal of Health and Social Behavior, 29*, 92-112; Bachman, J. G., Johnston, L. D., & O'Malley, P. M. (1990). Explaining the recent decline in cocaine use among young adults: Further evidence that perceived risks and disapproval lead to reduced drug use. *Journal of Health and Social Behavior, 31*, 173-184; Bachman, J. G., Johnston, L. D., & O'Malley, P. M. (1998). Explaining recent increases in students' marijuana use: Impacts of perceived risks and disapproval, 1976 through 1996. *American Journal of Public Health, 88*:887-892; Johnston, L. D. (1981). Frequent marijuana use: Correlates, possible effects, and reasons for using and quitting. In R. deSilva, R. Dupont, & G. Russell (Eds.), *Treating the marijuana dependent person* (pp. 8-14). New York: The American Council on Marijuana; Johnston, L. D. (1985). The etiology and prevention of substance use: What can we learn from recent historical changes? In C. L. Jones & R. J. Battjes (Eds.), *Etiology of drug abuse: implications for prevention* (NIDA Research Monograph No. 56, pp. 155-177). (DHHS Publication No. (ADM) 85-1335). Washington, DC: U.S. Government Printing Office.

BEST COPY AVAILABLE

- ***Marijuana*** is seen as the least risky of the illicitly used drugs, although sharp distinctions are made between different levels of marijuana use. In 2001, experimental use is perceived as being of "great risk" by only 12%–17% of all high school graduates (in the age band 19 to 30), whereas regular use is perceived to be that risky by over half (50%–62%) of them.

  It is interesting to note that in the mid-1980s and early 1990s, fewer of the older age groups attached great risk to marijuana use than the younger age bands. Indeed, there was a quite regular negative ordinal relationship between age and perceived risk for some years after 1980, when the first comparisons were available. This could have reflected an age effect, but we interpreted it as a cohort effect: the younger cohorts initially perceived marijuana as more dangerous than the older cohorts and persisted in this belief as they grew older. Newer cohorts, however, have become more relaxed in their attitudes. High school seniors from the class of 2001 are much less likely to perceive marijuana use as dangerous than did high school seniors in the late 1980s and early 1990s. This reflects what we have interpreted as "generational forgetting," a phenomenon wherein younger replacement cohorts no longer carry the knowledge, and perhaps the direct or vicarious experience on which the knowledge is based, that the older cohorts had when they were that age. The decline in perceived risk in the 1990s has been greater in the younger the age band, including grades 8 and 10. It has been least among the 27- to 30-year-olds. We think that much of this decline in perceived risk in the older age bands is a direct result of generational replacement of earlier cohorts by the more recent, less concerned ones. In fact, the relationship between perceived risk of regular use and age began to reverse by 1995, and this trend continued through 1997, before a leveling in perceived risk among seniors led to a curvilinear relationship as risk continued to decline among 19- to 26-year-olds. Now, the oldest respondents are most likely to see marijuana as dangerous. In 2001, 62% of the 27- to 30-year-olds and 55% of the 23- to 26-year-olds thought regular marijuana use carried great risk versus 50% of 19- to 22-year-olds, with seniors falling in the middle at 57%. This reversal of the relationship with age is consistent with an underlying cohort effect and could not simply be a reflection of a regular change in these attitudes being associated with age (i.e., an "age effect").

- Use of any of the other illicit drugs is seen as distinctly more risky than marijuana. Even the experimental use of ***amphetamines*** and ***barbiturates*** is perceived as risky by about 30%-40% of young adults aged 19 to 30, and 38%-54% think trying ***LSD*** or ***MDMA*** (***ecstasy***) involves great risk. Trying ***cocaine powder*** is seen as dangerous by 47%–54%, while using ***crack*** or ***heroin*** once or twice is seen as dangerous by 54%-72%.

- In recent years, the older age groups have been more likely than the younger age groups to see ***LSD*** and ***barbiturates*** as dangerous. Indeed, there is now a substantial age-related difference. The age distinctions for LSD and barbiturates have become sharper in recent years as perceived risk has declined more in the younger age groups than in the older ones—again indicating some important cohort changes in these attitudes, quite likely as a result of the process we have labeled "generational forgetting."

- There are now fair-sized age-related differences with respect to ***cocaine*** use, with the 23- through 30-year-olds reporting somewhat higher risk than the 18- to 22-year-olds, who have had less experience with cocaine. Among seniors and the young adult age groups, the danger associated with cocaine use on a regular basis grew considerably between 1980 and 1986. However, these changed beliefs did not translate into changed behavior until the perceived risk associated with experimental and occasional use began to rise sharply after 1986. When these two measures rose, a sharp decline in actual use occurred.

  We hypothesized that respondents saw only these lower levels of use as relevant to them and, therefore, saw themselves as vulnerable to the dangers only of such use. (No one starts out planning to be a heavy user; further, cocaine was not believed to be addictive in the early 1980s.) Based on this hypothesis, we included the additional question about occasional use in 1986, just in time to capture a sharp increase in perceived risk which occurred later that year, largely in response to the growing media frenzy about cocaine—and crack cocaine, in particular—and the widely publicized, cocaine-related deaths of Len Bias and others. After stabilizing for a few years, perceived risk began to fall off among seniors after about 1991, but not among the older age groups, once again suggesting lasting cohort differences were emerging. A decline in perceived risk began among the 19- to 22-year-olds starting after 1994, likely as the result of generational replacement with the high school seniors who earlier had come to see cocaine as more dangerous. The 23- to 26-year-olds followed suit in 2001, with no such decline in perceived risk observable so far in the upper-age stratum.

  A similar situation also now exists for ***crack***, for which perceived risk is highest in the two oldest age bands and lowest among seniors. Trend data (available since 1987) on the risks perceived to be associated with use of ***crack*** show increases in the 1987-1990 interval for all age groups, followed by relatively little change in the older two age strata. Since 1992, the high school seniors have shown decreases in the perceived risk of experimental or occasional use of crack—perhaps reflecting the onset of "generational forgetting"—leaving them as perceiving considerably less risk than the older groups. After 1994, the 19- to 22-year-olds also showed a decline on these two measures, once again probably as the result of generational replacement. Twenty-three- to 26-year-olds have shown some decline since 1996, and 27- to 30-year-olds since 1997 (through 2000).

- Questions about perceived risk of ***crystal methamphetamine*** (***ice***) use were introduced in 1990, and the results show what may be an important reason for its lack of rapid spread. More than half of all seniors and young adults perceived it as a quite dangerous drug even to try, perhaps because it was likened to crack in many media accounts. (Both drugs are burned and the fumes inhaled, both are stimulants, and both can produce a strong dependence.) There was rather little age-related difference in perceived risk associated with use of ice by age in 1990 and 1991 (although the two youngest age groups were somewhat higher). But, as perceived risk fell considerably among seniors (and eventually among 19- to 22-year-olds) and held steady or rose in the oldest two age groups, an age-related difference emerged. At present, the risk associated with the use of ice is considerably higher in the two older age bands than in the two younger ones. The opposite was true as recently as 1992—again suggesting cohort effects.

- ***MDMA*** (***ecstasy***) questions were introduced in the follow-up surveys in 1989, but were not asked of seniors until 1997. At the beginning of the 1990s, all young adult age bands viewed it as a fairly dangerous drug, even for experimentation. But, again, the different age bands had diverging trends during the 1990s, with the oldest two age bands continuing to see ecstasy as quite dangerous, but the 19- to 22-year-olds (and very likely the seniors, on whom we did not have data until 1997) coming to see it as less so. In 2000, 38% of the seniors saw great risk in trying ecstasy versus 49% of the 27- to 30-year-olds; in 2001, the corresponding figures were 46% and 54%. In fact, three of the four age bands showed appreciable increases in perceived risk for ecstasy in 2001, suggesting that a turnaround in the use of this drug may be about to occur.

- Young adults have been more cautious about ***heroin*** use than high school seniors. In general, there has been relatively little change over the years in the proportions of all age groups seeing regular heroin use as dangerous; the great majority of each group (over 86%) consistently have held this viewpoint. However, with regard to heroin experimentation, from 1975 to 1986 there had been a downward shift among the seniors in the proportion seeing great risk associated with trying heroin; then a sharp upturn occurred in 1987, followed by a leveling through 1991. This was then followed by some falloff in the early 1990s before an increase from 1995 through 1998. Young adults, although their data do not extend back as far, also showed an increased caution about heroin use in the latter half of the 1980s, followed by a leveling through most of the 1990s. In 1996 and 1997, young adults' perceived risk increased some, as happened among the twelfth graders (as well as among the eighth and tenth graders). These various trends may reflect, respectively, (a) the lesser attention paid to heroin by the media during the late 1970s and early 1980s; (b) the subsequent great increase in attention paid to intravenous heroin use in the latter half of the 1980s because of its important role in the spread of AIDS; (c) the emergence in the 1990s of heroin so pure that people no longer needed to use a needle to administer it, resulting in lower perceived risk; and (d) the subsequent increased attention given to heroin by the media (partly as a result of some overdose deaths by public figures and partly prompted by the emergence of "heroin chic" in the design industry), as well as an anti-heroin campaign in the media launched by the Partnership for a Drug-Free America in June 1996. At present the older two age groups see heroin use as more dangerous than do the younger two age groups (Table 6-1).

- A minority of young adults see ***heavy drinking on weekends*** as dangerous (37%–42%), which is true for high school seniors as well (44%). The belief of great risk of heaving drinking has increased some over the years in all of these age groups, rising from 36% in 1980 among seniors to 49% in 1992. Among 19- to 22-year-olds it rose from a low of 30% in 1981 to 42% in 1992; the increases among the older groups were smaller. The increase in this belief may well help to explain the important decline in actual heavy drinking and may in turn be explained by the media campaigns against drunk driving as well as by the increase in the drinking age in a number of states. After reaching peaks in the early 1990s, perceived risk for this behavior eased back some in all age strata.

- More than three-quarters (77%–84%) of the young adults perceive regular ***pack-a-day cigarette smoking*** as entailing high risk, higher than the 73% of seniors who hold that belief and much higher than the 57% of eighth graders who do so. In recent years, the 18-year-olds have consistently shown lower perceived risk than young adults, while tenth graders are lower still, and eighth graders lowest. Clearly, there is an age effect in young people coming to understand the dangers of smoking. Unfortunately, it appears that much of the learning occurs after the proverbial "horse is out of the barn" and many young people already have become addicted. These beliefs have strengthened very gradually in all age groups from senior year on, during the years we have monitored them. (See Table 6-1.) The parallel changes in these beliefs across the different age groups indicate a period effect, rather than a cohort effect, suggesting that all of these age groups were responding to common influences in the larger culture.

- The regular use of ***smokeless tobacco*** is seen as dangerous by only 48%–60% of young adults and by even fewer seniors (45%). However, these beliefs have also gradually strengthened in all age groups over the intervals covered (Table 6-1). As with cigarettes, the change appears to be a secular trend or period effect.

PERSONAL DISAPPROVAL OF DRUG USE

The questions asked of high school seniors concerning the extent to which they personally disapprove of various drug-using behaviors also are asked of follow-up respondents in one of the six questionnaire forms. Trends in the answers of young adults aged 19 to 22, 23 to 26, and 27 to 30 are contained in Table 6-2. Comparison data for twelfth graders are also provided for 1980 onward. (See also Table 8-4 in Chapter 8, Volume I, for the longer-term trends in high school seniors' levels of disapproval associated with using the various drugs.)

- In general, the levels of disapproval of the use of the various drugs among adults rank similarly across substances as they did among twelfth graders. The great majority disapprove of using, or even experimenting with, all of the ***illicit drugs other than marijuana***. For example, regular use of each of the following drugs is disapproved of by 95% or more of young adults in 2001: ***LSD***, ***cocaine***, ***amphetamines***,

barbiturates, and ***heroin***. Even experimentation with each of these drugs is disapproved of by 81% to 96% of the young adults. Many of these attitudes differ rather little as a function of age, at present; when there is a difference, it is usually the younger age groups that are the least disapproving.

- Even for ***marijuana***, about half of young adults now disapprove of experimentation (from 49% to 54%). In 2001, between 65% and 71% disapprove of occasional use, and 85% to 89% disapprove of regular use.

  Marijuana is the drug showing the widest fluctuations in disapproval over time—generally, fluctuations that parallel the changes in perceived risk (though sometimes with a one-year time lag). The most fluctuation has occurred among the seniors, nearly as much among the 19- to 22-year-olds, and the least among the 27- to 30-year-olds (Table 6-2). Among seniors, disapproval of regular use increased substantially in the 1980s, peaked in the early 1990s, declined through much of the 1990s, and then leveled around 1998. The 19- to 22-year-olds had quite a similar pattern, though the decline continued a year longer—likely due to generational replacement. Among 23- to 26-year-olds, there were some declines starting later in the 1990s, but the declines have been very modest.

- Beginning around 1990, there was some decrease in disapproval of trying ***LSD*** among all age groups (from similar high levels of disapproval, all at 90% or 91%). The decline was steepest among seniors, but there was a reversal of the decline among seniors in 1997, and disapproval of using LSD has increased some since then. Disapproval in the older age groups declined less and has not yet shown consistent evidence of a reversal. This pattern again suggests some lasting cohort differences.

- Most of the disapproval statistics for ***heroin*** use, with regard to all three levels of use, have remained very high and stable throughout the life of the study. There was, however, a little slippage in heroin disapproval rates among seniors from 1991 through 1996 (from 96% to 92% for disapproval of experimental use).

- Disapproval of ***regular cocaine*** use rose gradually among the 19- to 22-year-olds, from 89% in 1981 to 99% in 1990, about where it has remained since (97% in 2001). All three young adult age bands are now near the ceiling of 100%. Disapproval of *experimental* use of cocaine increased during the 1980s, peaking first among the seniors at 94% in 1991. It then peaked among 19- to 22-year-olds (at 92%) and the 23- to 36-year-olds (at 94%) in 1995. Finally, it peaked among 27- to 30-year-olds at 90% in 1999.

  Among all age groups, there has been some falloff in disapproval of cocaine use since reaching their peaks in the 1990s. Again, the lag in inflection points between the successive age groups suggests some lasting cohort differences in these attitudes. For the last few years, all age groups' disapproval of experimental use of cocaine has hovered around 90%.

- There were significant increases in disapproval of experimental use of ***amphetamines*** and ***barbiturates*** during the 1980s. Trying amphetamines once or twice was disapproved of by 73%-74% of 19- to 26-year-olds in 1984, compared to 84% by 1990, and the corresponding figures for trying barbiturates were 84%-85% in 1984 compared to 89%-91% by 1990. Since then, disapproval of amphetamine and barbiturate use slipped some among seniors after 1992, and among 19- to 22-year-olds after 1994, with the 23- to 26-year-olds following suit after 1996. There has been little such change among the 27- to 30-year-old stratum, as yet. This pattern of staggered change again suggests cohort effects working in these attitudes.

- The story for ***alcohol*** is quite an interesting one, in that changes in the minimum drinking age law may have led to modest changes in norms for the affected cohorts. Between 1980 and 1992, an increasing proportion of high school seniors favored total abstention, with the percent disapproving even drinking once or twice rising from 16% in 1980 to 33% in 1992. (This figure has fallen back some, to 27% as of 2001.) Among 19- to 22-year-olds, there was a modest increase from 15% to 22% disapproving any use between 1985 and 1989; this figure has declined to 16% in 2001. For the two oldest age groups, there has been rather little change in these attitudes so far. These differing trends may reflect the fact that during the 1980s, the drinking age in a number of states was raised so that by 1987 it was 21 in all states; this change would have the greatest effect on seniors, who may have incorporated the legal restrictions into their normative structure and, as they entered the second age band, brought these new norms with them. Put another way, these changes could reflect a cohort effect resulting from the laws that were prevailing when the cohort passed through late adolescence.

  Disapproval of ***daily drinking*** (of one or two drinks) has not shown any such cohort effects, since all age groups have moved in parallel, at similar levels of disapproval. The three youngest age bands (seniors through 26-year-olds) showed an increase in disapproval of daily drinking up until about 1990 (there was little data yet available on the oldest age group), but disapproval has declined a fair amount in all of the age groups since then. The decline may be due to widely covered reports that some cardiovascular benefits result from having one or two drinks per day.

  There was a considerable increase in disapproval of ***occasional heavy drinking*** from the early 1980s for the two youngest age groups (who started out the most tolerant), and this continued through 1992 for seniors (who then showed some drop-off) and through 1994 among 19- to 22-year-olds (who also then showed some drop-off). As Figure 5-18d illustrates, the prevalence of occasional heavy drinking declined substantially among seniors and 19- to 22-year-olds between 1981 and the early 1990s, as norms became more restrictive. There was little or no change in the older age strata, either in their levels of disapproval or in their rates of occasional heavy drinking.

At present, the seniors are most likely to disapprove of any drinking (as has been the case for some years) but are the least disapproving of heavy daily drinking. Weekend binge drinking is less disapproved by seniors and 19- to 22-year-olds—who tend to report the most such behavior—than by the two older age groups.

- Some fluctuations in the disapproval of ***cigarette smoking*** have occurred over the intervals covered by the study. Seniors showed some increase in disapproval between 1982 (69%) and 1992 (74%). Disapproval of pack-a-day-or-more smoking among seniors then fell from 1992 (74%) to 1997 (67%) before increasing in the last several years, to 72% in 2001. The 19- to 22-year-olds showed a similar increase from 1982 (66%) to 1989 (76%), followed by not much change since then overall (73% in 2001). In the last few years, the two older age groups have emerged as slightly more disapproving of smoking.

A FURTHER COMMENTARY: COHORT DIFFERENCES AND THEIR IMPLICATIONS FOR PREVENTION AND THEORY

It was noted earlier that the older respondents are more likely than younger ones to see the use of ***marijuana***, ***LSD***, ***heroin***, ***amphetamines***, ***MDMA***, ***ice***, ***cocaine***, ***crack***, and ***barbiturates*** as dangerous. We have offered the framework for a theory of drug epidemics in which direct learning (from personal use) and vicarious learning (from observing use by others in both the immediate and mass media environments) play important roles in changing these key attitudes.[31] To the extent that the current data on perceived risk represent cohort effects (enduring differences between class cohorts), these findings would be consistent with this theoretical perspective. Clearly, use of these particular drugs was greater when the older cohorts were growing up, and public attention and concern regarding the consequences of these drugs were greatest in the 1970s and early 1980s. In the early 1970s, LSD was alleged to cause brain damage and chromosomal damage, as well as bad trips, flashbacks, and behavior that could prove dangerous. Methamphetamine use was discouraged with the slogan "speed kills." There was a serious epidemic of heroin use in the early 1970s. More recent cohorts in our study (through the mid-1990s) were not exposed to these experiences. While there may have been a secular trend toward greater perceived risk for drugs in general, in the case of LSD there may also have been a cohort effect (younger cohorts seeing less danger) that was enough to offset the secular trend among seniors, who have shown a net decrease in perceived risk since 1980.

This vicarious learning process has a very practical importance for national strategy for preventing future epidemics. As future cohorts of youth grow up with less opportunity for such vicarious learning, because fewer in their immediate social circles and fewer public role models are using these drugs and exhibiting the adverse consequences of use, the less opportunity these youth will have to learn about the adverse consequences of these drugs in the normal course of growing up. Unless those hazards are convincingly communicated to them in *other ways*—for example, through school prevention programs, by their parents, and through the mass media, including public service advertising—they will become more susceptible to a new epidemic of use of the same or similar drugs.

---

[31] Johnston, L. D. (1991). Toward a theory of drug epidemics. In R. L. Donohew, H. Sypher, & W. Bukoski (Eds.), *Persuasive communication and drug abuse prevention* (pp. 93-132). Hillsdale, NJ: Lawrence Erlbaum.

Volume I, the companion volume to the present one, reports an increase in use of several drugs in eighth, tenth, and twelfth grades in 1994 through 1997. This increase suggests that this form of "generational forgetting"—in which replacement cohorts lose some of the knowledge held by their predecessors and thus become more vulnerable to using drugs—may well have been taking place during these years.

TABLE 6-1

Trends in Perceived Harmfulness of Drugs

High School Seniors (Age 18) and Young Adults in Modal Age Groups of 19-22, 23-26, and 27-30

(Entries are percentages)

Q. How much do you think people risk harming themselves (physically or in other ways), if they. . .

	Age Group	Percentage saying "great risk"[a]																						'00-'01 change
		1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	
Try marijuana once or twice	18	10.0	13.0	11.5	12.7	14.7	14.8	15.1	18.4	19.0	23.6	23.1	27.1	24.5	21.9	19.5	16.3	15.6	14.9	16.7	15.7	13.7	15.3	+1.6
	19-22	8.3	7.8	9.7	9.7	12.8	11.2	13.0	12.9	16.8	16.9	17.8	19.1	19.7	19.4	18.8	13.3	16.9	14.8	13.4	12.5	14.3	11.9	-2.4
	23-26					9.6	10.0	12.4	14.5	16.0	14.0	17.7	14.0	15.0	13.0	15.0	15.8	18.5	15.1	16.7	16.4	13.1	13.0	-0.1
	27-30									14.6	16.0	17.0	15.7	15.1	14.0	14.8	16.1	16.2	16.1	16.4	16.1	14.4	17.3	+2.9
Smoke marijuana occasionally	18	14.7	19.1	18.3	20.6	22.6	24.5	25.0	30.4	31.7	36.5	36.9	40.6	39.6	35.6	30.1	25.6	25.9	24.7	24.4	23.9	23.4	23.5	+0.1
	19-22	13.9	14.2	16.9	16.7	21.7	20.6	22.4	23.0	28.7	29.1	30.1	30.2	29.5	30.3	31.3	25.5	25.6	22.0	22.0	19.8	25.8	18.0	-7.8 ss
	23-26					15.8	16.3	20.9	20.8	26.8	25.3	30.4	26.2	27.4	24.0	25.5	27.7	27.3	26.4	26.8	26.4	24.9	20.5	-4.4
	27-30									24.2	25.7	28.7	27.4	27.5	26.8	28.1	28.3	28.1	26.0	25.8	25.3	25.8	25.0	-0.9
Smoke marijuana regularly	18	50.4	57.6	60.4	62.8	66.9	70.4	71.3	73.5	77.0	77.5	77.8	78.6	76.5	72.5	65.0	60.8	59.9	58.1	58.5	57.4	58.3	57.4	-0.9
	19-22	43.9	47.8	52.4	58.4	62.2	66.8	67.6	69.4	72.4	74.9	73.0	75.0	69.3	69.2	65.0	62.1	61.3	60.7	53.4	55.2	58.0	49.6	-8.3 s
	23-26					52.9	57.5	59.4	65.3	68.3	72.1	71.0	70.9	67.3	64.1	63.2	64.2	62.7	64.1	62.7	60.1	60.3	55.1	-5.3
	27-30									67.5	69.1	69.2	67.5	68.8	69.4	65.6	69.2	67.3	65.0	63.6	66.1	64.0	61.7	-2.4
Try LSD once or twice	18	43.9	45.5	44.9	44.7	45.4	43.5	42.0	44.9	45.7	46.0	44.7	46.6	42.3	39.5	38.8	36.4	36.2	34.7	37.4	34.9	34.3	33.2	-1.1
	19-22	44.8	44.4	45.0	44.7	46.0	44.3	47.6	49.4	49.2	49.5	49.3	48.0	45.6	42.4	42.3	40.3	44.4	40.1	38.7	38.1	37.9	37.5	-0.4
	23-26					48.3	46.9	47.9	51.5	53.7	50.7	52.0	50.1	49.7	49.0	46.8	45.8	46.1	46.6	45.7	49.3	44.9	48.5	+3.6
	27-30									53.3	55.6	54.6	52.5	53.0	51.5	53.5	52.5	50.1	52.0	52.0	49.9	46.4	46.7	+0.3
Take LSD regularly	18	83.0	83.5	83.5	83.2	83.8	82.9	82.6	83.8	84.2	84.3	84.5	84.3	81.8	79.4	79.1	78.1	77.8	76.6	76.5	76.1	75.9	74.1	-1.7
	19-22	83.4	85.3	86.2	86.0	84.5	86.4	87.1	85.6	85.4	85.5	85.8	86.6	87.0	81.3	81.0	80.5	82.4	83.6	78.6	82.2	81.6	79.2	-2.4
	23-26					89.0	86.6	88.7	90.0	89.2	89.0	88.2	89.1	87.3	85.3	87.5	86.3	84.7	85.6	82.1	85.4	84.1	86.0	+1.9
	27-30									89.1	91.2	92.0	87.1	88.5	89.0	89.2	88.4	87.0	87.2	90.5	87.8	85.3	86.9	+1.6
Try PCP once or twice	18								55.6	58.8	56.6	55.2	51.7	54.8	50.8	51.5	49.1	51.0	48.8	46.8	44.8	45.0	46.2	+1.3
	19-22								63.6	63.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	—
	23-26								64.8	63.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	—
	27-30									65.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	—
Try MDMA (ecstasy) once or twice	18																		33.8	34.5	35.0	37.9	45.7	+7.7 sss
	19-22										45.2	47.1	48.8	46.4	45.0	51.1	48.3	46.7	45.5	42.7	37.6	37.9	40.5	+2.7
	23-26										49.5	47.2	47.4	45.5	41.9	50.6	49.3	50.4	50.5	47.7	50.0	46.7	45.7	-1.0
	27-30										44.9	48.7	47.7	44.2	51.7	47.3	50.0	50.6	48.8	50.4	50.9	48.9	53.6	+4.7
Try cocaine once or twice	18	31.3	32.1	32.8	33.0	35.7	34.0	33.5	47.9	51.2	54.9	59.4	59.4	56.8	57.6	57.2	53.7	54.2	53.6	54.6	52.1	51.1	50.7	-0.4
	19-22	31.4	30.4	33.3	28.7	33.1	33.2	35.5	45.9	51.9	51.5	58.1	58.7	56.1	60.5	63.8	57.7	61.9	55.5	55.4	52.8	56.7	48.9	-7.8 s
	23-26					31.3	31.1	35.9	48.0	47.1	51.3	51.5	50.5	53.5	54.1	56.0	58.7	57.2	63.1	60.2	62.6	63.1	62.4	-0.7
	27-30									45.3	53.0	51.6	52.6	51.8	54.7	53.5	56.4	53.6	54.6	60.5	61.7	59.9	60.9	+1.0
Take cocaine occasionally	18							54.2	66.8	69.2	71.8	73.9	75.5	75.1	73.3	73.7	70.8	72.1	72.4	70.1	70.1	69.5	69.9	+0.4
	19-22							53.8	61.3	67.1	72.6	74.6	72.6	74.9	75.4	78.0	73.4	76.6	76.1	71.2	68.0	72.4	70.0	-2.3
	23-26							50.9	62.6	63.2	69.9	69.9	70.3	69.9	72.8	70.3	76.0	71.3	76.5	74.2	77.8	76.2	74.2	-2.0
	27-30									62.6	66.6	66.6	69.1	69.9	69.1	69.9	70.0	67.8	73.8	73.2	75.4	76.5	78.1	+1.5

(Table continued on next page)

TABLE 6-1 (cont.)

Trends in Perceived Harmfulness of Drugs

High School Seniors (Age 18) and Young Adults in Modal Age Groups of 19-22, 23-26, and 27-30

(Entries are percentages)

Q. How much do you think people risk harming themselves (physically or in other ways), if they. . .	Age Group	Percentage saying "great risk"ᵃ																						'00-'01 change
		1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	
Take cocaine regularly	18	69.2	71.2	73.0	74.3	78.8	79.0	82.2	88.5	89.2	90.2	91.1	90.4	90.2	90.1	89.3	87.9	88.3	87.1	86.3	85.8	86.2	84.1	-2.1
	19-22	65.2	69.3	71.5	75.2	75.1	82.9	82.0	88.0	90.3	89.1	93.9	93.5	92.9	91.7	92.2	91.5	92.2	91.6	88.7	88.5	90.7	85.1	-5.6 s
	23-26					75.6	76.9	83.0	88.9	90.9	91.2	91.2	92.7	89.9	91.9	92.6	93.3	90.6	93.2	92.9	92.7	92.9	91.1	-1.8
	27-30									88.9	92.0	91.4	90.9	92.0	91.6	92.1	91.3	91.6	92.7	93.0	92.4	92.3	94.5	+2.3
Try crack once or twice	18								57.0	62.1	62.9	64.3	60.6	62.4	57.6	58.4	54.6	56.0	54.0	52.2	48.2	48.4	49.4	+1.0
	19-22								59.4	67.3	68.5	69.4	66.9	65.4	63.5	70.1	61.9	65.2	62.0	59.3	56.1	52.9	54.1	+1.3
	23-26								59.1	63.5	69.8	67.3	66.9	67.1	64.2	69.3	64.8	68.6	64.7	67.3	64.6	63.2	59.8	-3.4
	27-30									66.5	64.9	68.7	66.8	64.3	68.8	65.6	66.4	66.7	68.5	66.5	65.0	62.9	69.3	+6.4
Take crack occasionally	18								70.4	73.2	75.3	80.4	76.5	76.3	73.9	73.8	72.8	71.4	70.3	68.7	67.3	65.8	65.4	-0.4
	19-22								75.0	77.3	81.8	82.3	82.7	81.9	83.6	84.3	78.8	83.5	79.1	79.1	75.5	74.9	72.3	-2.5
	23-26								70.3	74.0	79.9	81.1	83.9	84.4	81.6	83.2	81.4	85.9	80.8	84.2	81.6	84.0	80.1	-3.9
	27-30									76.4	76.7	82.6	81.8	79.1	83.6	78.6	81.1	81.3	85.3	81.7	79.8	81.6	84.4	+2.8
Take crack regularly	18								84.6	84.8	85.6	91.6	90.1	89.3	87.5	89.6	88.6	88.0	86.2	85.3	85.4	85.3	85.8	+0.4
	19-22								89.6	91.1	94.1	94.9	95.6	93.4	96.2	96.0	94.2	94.7	93.3	92.8	92.3	91.1	89.6	-1.5
	23-26								88.0	89.2	91.5	94.2	95.4	94.1	93.4	94.9	95.5	96.1	91.4	95.6	94.4	95.6	93.4	-2.2
	27-30									89.6	89.5	95.3	94.4	93.3	93.5	93.0	94.0	94.3	96.0	94.3	95.2	93.5	96.8	+3.3 s
Try cocaine powder once or twice	18								45.3	51.7	53.8	53.9	53.6	57.1	53.2	55.4	52.0	53.2	51.4	48.5	46.1	47.0	49.0	+2.0
	19-22								44.0	48.6	51.1	54.5	52.7	56.2	49.7	62.0	55.8	57.1	53.8	53.0	47.9	48.0	47.1	-0.8
	23-26								41.0	43.6	48.4	48.9	47.4	45.9	45.6	52.5	48.9	57.2	53.6	54.1	53.8	53.2	53.9	+0.7
	27-30									42.0	45.1	46.2	43.3	42.3	49.9	47.1	48.2	48.9	49.1	49.8	49.7	52.2	53.3	+1.1
Take cocaine powder occasionally	18								56.8	61.9	65.8	71.1	69.8	70.8	68.6	70.6	69.1	68.8	67.7	65.4	64.2	64.7	63.2	-1.5
	19-22								58.0	59.0	63.2	70.0	69.9	72.6	70.6	75.4	73.0	77.4	70.7	73.0	69.3	69.3	64.4	-4.9
	23-26								50.0	53.2	62.2	63.3	67.0	65.8	64.0	68.8	68.8	76.1	72.8	77.0	70.8	76.0	70.5	-5.5
	27-30									53.6	52.7	60.9	59.2	61.2	64.3	61.0	65.9	68.2	69.7	68.5	70.1	71.3	73.5	+2.2
Take cocaine powder regularly	18								81.4	82.9	83.9	90.2	88.9	88.4	87.0	88.6	87.8	86.8	86.0	84.1	84.6	85.5	84.4	-1.1
	19-22								86.6	87.6	91.3	92.5	93.8	92.1	94.0	94.9	93.5	93.8	92.8	91.5	92.4	90.7	89.8	-0.9
	23-26								82.9	84.1	88.5	92.4	93.8	91.3	92.4	92.8	92.1	94.8	90.8	93.7	93.6	94.2	92.2	-1.9
	27-30									85.1	86.7	92.7	91.1	91.5	92.5	90.7	92.7	91.7	93.0	92.3	93.1	91.5	94.0	+2.6
Try heroin once or twice	18	52.1	52.9	51.1	50.8	49.8	47.3	45.8	53.6	54.0	53.8	55.4	55.2	50.9	50.7	52.8	50.9	52.5	56.7	57.8	56.0	54.2	55.6	+1.3
	19-22	57.8	56.8	54.4	52.5	58.7	51.0	55.5	57.9	58.9	59.6	58.3	59.9	59.8	58.9	60.8	58.9	61.0	63.9	60.7	63.5	63.2	64.0	+0.8
	23-26					58.2	59.2	60.8	66.6	65.4	62.3	64.1	62.4	63.7	65.0	63.3	64.1	63.5	67.3	67.3	68.0	70.7	71.9	+1.3
	27-30									66.0	69.7	67.5	66.1	66.5	69.3	69.6	66.4	66.4	67.9	69.7	70.1	67.4	68.2	+0.8

(Table continued on next page)

TABLE 6-1 (cont.)

Trends in Perceived Harmfulness of Drugs

High School Seniors (Age 18) and Young Adults in Modal Age Groups of 19-22, 23-26, and 27-30

(Entries are percentages)

Q. How much do you think people risk harming themselves (physically or in other ways), if they. . .	Age Group	Percentage saying "great risk"ᵃ 1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00-'01 change
Take heroin occasionally	18	70.9	72.2	69.8	71.8	70.7	69.8	68.2	74.6	73.8	75.5	76.6	74.9	74.2	72.0	72.1	71.0	74.8	76.3	76.9	77.3	74.6	75.9	+1.4
	19-22	77.5	77.8	73.6	74.5	74.9	73.6	77.2	77.6	77.5	79.8	80.8	80.2	81.6	78.8	79.0	77.9	82.1	84.7	80.4	82.5	82.0	83.6	+1.6
	23-26					81.2	80.7	78.9	84.5	82.4	80.8	83.4	84.4	81.5	82.1	80.8	85.3	82.4	86.5	83.9	88.5	86.6	88.4	+1.8
	27-30									86.0	86.8	85.3	84.3	84.9	86.2	86.8	83.1	83.8	85.8	86.6	87.1	86.5	86.4	-0.2
Take heroin regularly	18	86.2	87.5	86.0	86.1	87.2	86.0	87.1	88.7	88.8	89.5	90.2	89.6	89.2	88.3	88.0	87.2	89.5	88.9	89.1	89.9	89.2	88.3	-0.9
	19-22	87.2	89.9	87.5	88.6	86.8	90.2	90.7	90.2	89.6	90.8	91.2	91.5	92.2	89.2	91.2	89.9	94.0	93.7	92.4	92.8	94.0	91.3	-2.7
	23-26					92.0	90.1	90.6	92.8	91.5	91.3	91.0	92.6	91.3	91.6	93.0	93.5	92.7	94.4	93.4	93.7	94.8	95.9	+1.1
	27-30									92.7	93.5	93.0	90.7	91.3	92.6	93.8	92.4	92.1	93.8	95.0	93.7	94.2	94.5	+0.3
Try amphetamines once or twice	18	29.7	26.4	25.3	24.7	25.4	25.2	25.1	29.1	29.6	32.8	32.2	36.3	32.6	31.3	31.4	28.8	30.8	31.0	35.3	32.2	32.6	34.7	+2.0
	19-22	24.6	24.6	27.8	24.8	26.9	23.9	27.1	27.4	31.7	28.9	35.6	32.8	34.5	33.3	36.3	32.9	36.8	30.1	31.7	33.7	35.0	34.2	-0.8
	23-26					29.6	29.4	29.4	34.1	33.2	32.5	35.3	31.0	32.7	32.6	32.9	34.3	34.9	37.8	40.9	41.8	39.9	41.6	+1.7
	27-30									35.2	37.5	36.9	36.5	36.2	34.0	37.5	36.0	36.2	34.5	37.6	36.3	39.4	38.5	-0.9
Take amphetamines regularly	18	69.1	66.1	64.7	64.8	67.1	67.2	67.3	69.4	69.8	71.2	71.2	74.1	72.4	69.9	67.0	65.9	66.8	66.0	67.7	66.4	66.3	67.1	+0.8
	19-22	71.9	69.9	68.3	69.9	68.4	68.5	72.3	72.0	73.9	71.3	74.0	77.1	73.5	73.5	71.6	72.2	75.8	72.3	71.9	72.4	73.4	71.1	-2.2
	23-26					75.8	77.2	75.6	78.2	77.4	76.7	77.8	79.4	76.4	76.2	73.6	80.5	78.5	79.1	77.5	78.7	79.0	77.7	-1.2
	27-30									80.6	82.9	83.3	79.4	80.3	79.8	78.4	77.7	75.6	77.4	81.1	82.6	80.8	79.9	-0.9
Try crystal meth (ice)	18												61.6	61.9	57.5	58.3	54.4	55.3	54.4	52.7	51.2	51.3	52.7	+1.4
	19-22											57.8	58.6	57.7	57.5	61.4	58.9	61.1	56.4	55.8	50.6	49.2	52.5	+3.3
	23-26											56.5	56.0	55.6	52.0	61.0	57.8	64.1	60.7	58.2	61.3	60.1	59.2	-0.9
	27-30											59.6	57.2	52.7	60.3	57.9	58.5	59.1	59.8	59.9	61.0	59.7	66.4	+6.7
Try barbiturates once or twice	18	30.9	28.4	27.5	27.0	27.4	26.1	25.4	30.9	29.7	32.2	32.4	35.1	32.2	29.2	29.9	26.3	29.1	26.9	29.0	26.1	25.0	25.7	+0.7
	19-22	27.6	26.4	30.5	25.4	29.9	25.0	30.7	29.6	32.7	30.5	36.4	33.5	33.5	33.4	35.0	30.5	34.1	31.4	27.7	28.5	30.3	30.0	-0.3
	23-26					32.2	29.9	30.2	35.5	35.8	32.9	37.9	31.8	33.5	32.8	34.0	34.8	35.8	37.3	40.3	39.4	37.0	38.5	+1.5
	27-30									37.2	38.7	39.0	37.0	38.2	36.5	40.5	36.6	37.2	35.7	36.7	35.2	36.3	40.9	+4.5
Take barbiturates regularly	18	72.2	69.9	67.6	67.7	68.5	68.3	67.2	69.4	69.6	70.5	70.2	70.5	70.2	66.1	63.3	61.6	60.4	56.8	56.3	54.1	52.3	50.3	-2.0
	19-22	74.0	73.3	72.7	71.3	71.6	71.7	74.5	73.0	74.0	71.7	75.5	75.5	73.6	71.1	69.4	66.4	70.7	69.5	65.1	64.7	64.6	61.8	-2.8
	23-26					77.4	77.0	74.9	79.9	79.8	76.6	80.5	77.7	76.3	75.0	74.3	77.6	77.1	75.2	73.9	75.1	73.8	73.1	-0.8
	27-30									81.5	83.7	84.0	79.6	78.6	80.2	78.3	77.7	74.1	77.1	79.9	80.7	75.5	78.2	+2.7
Try one or two drinks of an alcoholic beverage (beer, wine, liquor)	18	3.8	4.6	3.5	4.2	4.6	5.0	4.6	6.2	5.0	6.0	8.3	9.1	8.6	8.2	7.6	5.9	7.3	6.7	8.0	8.3	6.4	8.7	+2.3 s
	19-22	3.0	3.4	3.1	2.3	4.7	3.1	5.4	3.5	3.9	5.9	6.1	5.4	5.8	6.6	6.5	4.5	3.3	3.2	4.2	5.7	5.4	4.8	-0.6
	23-26					5.5	3.0	6.5	6.6	4.2	5.1	5.7	4.4	5.6	3.2	4.5	4.3	4.8	4.4	4.4	6.6	3.5	5.5	2.0
	27-30									5.0	6.3	4.4	6.6	5.6	4.7	4.1	6.7	4.7	4.0	6.2	5.9	4.7	5.5	+0.8

(Table continued on next page)

TABLE 6-1 (cont.)
Trends in Perceived Harmfulness of Drugs
High School Seniors (Age 18) and Young Adults in Modal Age Groups of 19-22, 23-26, and 27-30

(Entries are percentages)

Q. How much do you think people risk harming themselves (physically or in other ways), if they. . .	Age Group	Percentage saying "great risk"ᵃ																						'00-'01 change
		1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	
Take one or two drinks nearly every day	18	20.3	21.6	21.6	21.6	23.0	24.4	25.1	26.2	27.3	28.5	31.3	32.7	30.6	28.2	27.0	24.8	25.1	24.8	24.3	21.8	21.7	23.4	+1.7
	19-22	22.7	22.9	23.2	23.2	25.0	26.3	27.3	26.1	26.5	28.1	30.1	29.1	30.2	28.0	27.5	24.0	23.0	24.2	22.1	23.9	22.1	19.6	-2.5
	23-26					27.8	27.4	26.9	30.2	29.1	27.8	31.1	30.4	31.6	25.9	26.2	26.1	22.0	20.2	21.0	26.0	21.7	23.5	+1.8
	27-30									27.4	31.7	32.2	31.7	30.9	28.0	27.4	27.2	24.0	24.8	20.8	25.3	22.0	22.7	+0.7
Take four or five drinks nearly every day	18	65.7	64.5	65.5	66.8	68.4	69.8	66.5	69.7	68.5	69.8	70.9	69.5	70.5	67.8	66.2	62.8	65.6	63.0	62.1	61.1	59.9	60.7	+0.8
	19-22	71.2	72.7	73.3	72.7	76.2	74.1	74.0	76.4	72.8	75.7	76.1	75.5	71.8	72.1	70.3	72.5	68.5	71.4	70.4	69.9	69.9	64.5	-5.5
	23-26					76.7	77.9	80.1	77.2	81.8	76.9	79.7	80.2	78.0	76.7	77.5	75.2	72.0	75.1	69.3	72.8	71.7	75.8	+4.2
	27-30									79.3	81.7	84.7	79.1	79.9	79.1	76.6	82.2	76.1	79.3	75.7	75.1	77.4	72.8	-4.7
Have five or more drinks once or twice each weekend	18	35.9	36.3	36.0	38.6	41.7	43.0	39.1	41.9	42.6	44.0	47.1	48.6	49.0	48.3	46.5	45.2	49.5	43.0	42.8	43.1	42.7	43.6	+0.8
	19-22	34.2	30.1	33.5	36.6	37.9	40.2	34.6	36.7	36.9	42.4	40.6	40.8	41.8	42.4	41.9	39.9	40.7	36.6	42.0	37.2	38.9	37.2	-1.6
	23-26					38.4	39.7	39.1	39.8	35.8	37.7	40.2	39.3	37.6	36.2	40.2	37.9	39.1	37.4	41.1	40.2	34.9	39.0	+4.2
	27-30									41.0	42.3	44.1	42.2	45.1	42.9	43.2	44.6	41.5	40.0	40.2	41.9	37.9	41.6	+3.7
Smoke one or more packs of cigarettes per day	18	63.7	63.3	60.5	61.2	63.8	66.5	66.0	68.6	68.0	67.2	68.2	69.4	69.2	69.5	67.6	65.6	68.2	68.7	70.8	70.8	73.1	73.3	+0.2
	19-22	66.5	61.7	64.0	62.1	69.1	71.4	70.4	70.6	71.0	73.4	72.5	77.9	72.6	76.0	71.2	71.6	73.8	76.3	77.2	75.7	77.1	76.6	-0.5
	23-26					71.1	70.1	75.7	73.6	75.5	71.4	78.5	75.3	76.3	78.4	76.4	76.0	76.0	77.6	76.5	80.9	79.7	83.9	+4.1
	27-30									72.8	75.2	77.8	75.4	77.6	75.0	75.3	75.6	73.0	80.3	80.9	80.7	78.4	82.7	+4.4
Use smokeless tobacco regularly	18							25.8	30.0	33.2	32.9	34.2	37.4	35.5	38.9	36.6	33.2	37.4	38.6	40.9	41.1	42.2	45.4	+3.3
	19-22							29.7	34.1	31.1	37.1	33.5	38.9	40.1	43.3	37.6	42.3	40.9	46.5	47.4	47.0	52.0	48.4	-3.6
	23-26							37.0	38.5	35.8	37.9	40.1	38.9	41.6	44.6	42.9	46.6	47.2	46.2	48.4	53.1	49.8	59.8	+10.0 ss
	27-30									42.8	42.8	43.8	44.3	44.1	47.3	46.3	44.2	43.6	50.2	52.6	53.6	49.9	53.2	+3.3
Approximate Weighted N=	18	*3234*	*3604*	*3557*	*3305*	*3262*	*3250*	*3020*	*3315*	*3276*	*2796*	*2553*	*2549*	*2684*	*2759*	*2591*	*2603*	*2449*	*2579*	*2564*	*2306*	*2130*	*2173*	
	19-22	*590*	*585*	*583*	*585*	*579*	*547*	*581*	*570*	*551*	*565*	*552*	*533*	*527*	*480*	*490*	*500*	*469*	*464*	*431*	*447*	*424*	*430*	
	23-26					*540*	*512*	*545*	*531*	*527*	*498*	*511*	*505*	*518*	*503*	*465*	*446*	*438*	*420*	*413*	*418*	*400*	*392*	
	27-30									*513*	*587*	*490*	*486*	*482*	*473*	*443*	*450*	*422*	*434*	*416*	*400*	*377*	*384*	

Source: The Monitoring the Future Study, the University of Michigan.

NOTES: Level of significance of difference between the two most recent years: s = .05, ss = .01, sss = .001. Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding.

'NA' indicates data not available.

ᵃAnswer alternatives were: (1) No risk, (2) Slight risk, (3) Moderate risk, (4) Great risk, and (5) Can't say, drug unfamiliar.

TABLE 6-2

Trends in Proportions Disapproving of Drug Use

High School Seniors (Age 18) and Young Adults in Modal Age Groups of 19-22, 23-26, and 27-30

(Entries are percentages)

Q. Do you disapprove of people (who are 18 or older) doing each of the following?	Age Group	Percentage disapproving[a]																						
		1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00-'01 change
Try marijuana once or twice	18	39.0	40.0	45.5	46.3	49.3	51.4	54.6	56.6	60.8	64.6	67.8	68.7	69.9	63.3	57.6	56.7	52.5	51.0	51.6	48.8	52.5	49.1	-3.4
	19-22	38.2	36.1	37.0	42.0	44.1	46.6	51.6	52.8	55.8	62.4	59.6	60.4	57.8	60.6	63.5	57.1	55.4	56.2	55.9	54.0	55.2	49.3	-5.9
	23-26					41.2	38.6	42.6	49.1	48.7	52.5	57.5	58.8	55.0	54.6	52.3	51.9	56.3	54.5	55.3	55.7	54.8	51.2	-3.6
	27-30									49.0	50.9	53.8	54.6	51.9	56.8	55.7	57.5	54.1	59.0	55.7	52.6	58.0	54.4	-3.6
Smoke marijuana occasionally	18	49.7	52.6	59.1	60.7	63.5	65.8	69.0	71.6	74.0	77.2	80.5	79.4	79.7	75.5	68.9	66.7	62.9	63.2	64.4	62.5	65.8	63.2	-2.7
	19-22	49.6	49.1	51.3	56.0	60.4	62.6	66.7	67.2	69.5	77.3	76.3	77.0	74.8	75.8	76.9	70.4	68.9	70.2	67.8	66.4	70.7	64.6	-6.1
	23-26					54.8	52.8	57.0	64.9	63.4	69.4	73.7	73.3	74.0	71.9	70.9	68.1	72.5	69.2	70.4	71.1	68.6	67.4	-1.2
	27-30									65.3	67.1	68.9	73.0	67.2	72.2	69.4	72.5	70.5	74.5	72.4	71.5	72.2	70.9	-1.2
Smoke marijuana regularly	18	74.6	77.4	80.6	82.5	84.7	85.5	86.6	89.2	89.3	89.8	91.0	89.3	90.1	87.6	82.3	81.9	80.0	78.8	81.2	78.6	79.7	79.3	-0.4
	19-22	74.3	77.2	80.0	81.8	84.9	86.7	89.2	88.7	89.1	91.2	93.1	91.3	89.5	90.2	90.1	86.8	87.7	88.1	85.3	84.5	86.6	84.5	-2.0
	23-26					80.6	81.3	83.3	87.4	86.9	90.4	91.0	89.6	90.2	92.1	90.3	90.1	88.9	88.1	87.5	86.1	83.9	86.4	+2.5
	27-30									87.6	87.5	89.7	89.6	87.2	89.4	88.7	91.9	89.9	92.1	89.2	90.0	89.5	89.3	-0.2
Try LSD once or twice	18	87.3	86.4	88.8	89.1	88.9	89.5	89.2	91.6	89.8	89.7	89.8	90.1	88.1	85.9	82.5	81.1	79.6	80.5	82.1	83.0	82.4	81.8	-0.6
	19-22	87.4	84.8	85.9	88.4	88.1	89.1	90.4	90.0	90.9	89.3	90.5	88.4	84.6	88.5	86.8	84.2	83.0	83.1	80.8	83.2	82.3	81.4	-0.8
	23-26					87.3	87.1	88.0	89.9	91.4	91.0	90.7	89.1	88.8	86.9	87.3	87.1	86.7	87.9	84.1	84.8	80.3	83.0	+2.6
	27-30									91.0	87.2	89.7	87.9	85.6	88.8	88.2	87.4	88.7	88.7	87.3	86.6	87.2	85.7	-1.4
Take LSD regularly	18	96.7	96.8	96.7	97.0	96.8	97.0	96.6	97.8	96.4	96.4	96.3	96.4	95.5	95.8	94.3	92.5	93.2	92.9	93.5	94.3	94.2	94.0	-0.2
	19-22	98.2	97.4	97.7	97.6	97.6	98.8	98.5	98.0	98.1	97.5	99.1	97.5	97.0	97.8	97.7	96.8	97.0	97.4	96.3	97.0	96.8	96.5	-0.3
	23-26					99.2	98.0	98.5	99.0	98.0	98.4	98.3	98.4	98.3	98.1	97.7	96.7	97.7	96.1	97.6	98.0	97.0	97.1	+0.2
	27-30									98.8	97.1	98.9	98.9	97.5	98.5	98.7	98.6	98.1	97.5	97.4	97.9	98.6	98.2	-0.4
Try cocaine once or twice	18	76.3	74.6	76.6	77.0	79.7	79.3	80.2	87.3	89.1	90.5	91.5	93.6	93.0	92.7	91.6	90.3	90.0	88.0	89.5	89.1	88.2	88.1	-0.1
	19-22	73.0	69.3	69.9	74.1	72.5	77.6	78.9	82.3	85.3	88.8	90.1	91.2	90.6	92.7	93.9	94.2	92.0	91.7	89.9	90.9	89.9	87.7	-2.2
	23-26					70.2	70.5	72.1	80.0	82.9	85.5	88.3	88.0	87.3	89.2	89.2	91.8	90.7	91.5	89.0	91.3	87.1	90.1	+3.0
	27-30									82.1	81.0	85.5	86.9	83.9	85.7	86.6	86.6	88.3	89.2	90.3	90.4	89.4	90.3	+0.9
Take cocaine regularly	18	91.1	90.7	91.5	93.2	94.5	93.8	94.3	96.7	96.2	96.4	96.7	97.3	96.9	97.5	96.6	96.1	95.6	96.0	95.6	94.9	95.5	94.9	-0.6
	19-22	91.6	89.3	91.9	94.6	95.0	96.3	97.0	97.2	97.9	97.4	98.9	97.9	98.4	97.8	98.8	98.2	97.9	98.0	97.8	97.6	98.0	97.2	-0.8
	23-26					95.7	95.3	97.3	98.1	97.6	98.3	98.4	98.5	98.7	98.4	98.8	97.7	97.8	96.9	98.5	98.3	97.8	97.5	-0.3
	27-30									98.1	97.0	99.3	99.0	97.2	98.7	99.0	98.9	98.5	97.9	97.8	98.8	98.7	98.4	-0.4
Try heroin once or twice	18	93.5	93.5	94.6	94.3	94.0	94.0	93.3	96.2	95.0	95.4	95.1	96.0	94.9	94.4	93.2	92.8	92.1	92.3	93.7	93.5	93.0	93.1	+0.1
	19-22	96.3	95.4	95.6	95.2	95.1	96.2	96.8	96.3	97.1	96.4	98.3	95.9	95.9	96.3	96.6	95.6	95.2	95.6	95.1	95.5	94.1	94.2	+0.1
	23-26					96.7	94.9	96.4	97.1	97.4	96.7	96.8	96.9	96.3	95.4	96.5	95.9	96.1	95.2	94.6	96.3	93.1	95.0	+1.8
	27-30									97.9	95.8	97.5	96.6	94.8	97.3	94.7	96.3	96.0	96.9	95.9	96.7	95.9	96.4	+0.5

(Table continued on next page)

TABLE 6-2 (cont.)

Trends in Proportions Disapproving of Drug Use

High School Seniors (Age 18) and Young Adults in Modal Age Groups of 19-22, 23-26, and 27-30

(Entries are percentages)

Q. Do you disapprove of people (who are 18 or older) doing each of the following?	Age Group	Percentage disapproving[a]																						'00-'01
		1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	change
Take heroin occasionally	18	96.7	97.2	96.9	96.9	97.1	96.8	96.6	97.9	96.9	97.2	96.7	97.3	96.8	97.0	96.2	95.7	95.0	95.4	96.1	95.7	96.0	95.4	-0.6
	19-22	98.6	97.8	98.3	98.3	98.6	98.7	98.3	98.3	98.3	97.9	99.2	98.2	98.1	98.1	98.3	97.7	97.9	97.8	98.2	97.2	98.0	97.9	-0.1
	23-26					99.2	98.2	98.8	99.1	98.4	98.3	98.1	99.0	98.7	98.4	98.6	97.7	98.7	97.4	97.5	98.5	98.2	97.8	-0.5
	27-30									99.2	97.3	99.0	98.9	97.0	98.9	98.7	98.9	98.0	98.7	97.6	98.8	98.6	98.4	-0.1
Take heroin regularly	18	97.6	97.8	97.5	97.7	98.0	97.6	97.6	98.1	97.2	97.4	97.5	97.8	97.2	97.5	97.1	96.4	96.3	96.4	96.6	96.4	96.6	96.2	-0.4
	19-22	99.2	98.5	98.6	98.7	98.7	99.1	98.9	98.6	98.4	98.3	99.5	98.5	98.3	98.4	98.8	98.4	98.3	98.1	98.3	98.2	98.5	98.2	-0.3
	23-26					99.4	98.8	99.1	99.4	98.7	98.7	98.5	99.3	99.2	98.9	98.8	98.7	98.9	97.6	98.5	98.7	98.8	98.4	-0.3
	27-30									99.4	97.6	99.4	99.0	97.8	99.0	99.4	99.1	98.6	98.4	98.1	98.8	98.7	98.7	-0.1
Try amphetamines once or twice	18	75.4	71.1	72.6	72.3	72.8	74.9	76.5	80.7	82.5	83.3	85.3	86.5	86.9	84.2	81.3	82.2	79.9	81.3	82.5	81.9	82.1	82.3	+0.2
	19-22	74.5	70.5	68.9	74.0	73.0	75.6	78.9	79.9	81.8	85.3	84.4	83.9	83.8	87.2	88.3	85.0	84.4	83.3	84.6	84.9	83.8	82.1	-1.7
	23-26					74.2	74.2	74.6	80.3	83.5	83.3	84.1	84.8	83.4	84.8	82.7	86.0	86.4	85.7	83.5	84.5	82.4	83.9	+1.4
	27-30									83.5	81.0	84.3	83.7	80.9	83.5	82.0	83.1	85.8	86.3	85.9	86.4	84.5	86.0	+1.5
Take amphetamines regularly	18	93.0	91.7	92.0	92.6	93.6	93.3	93.5	95.4	94.2	94.2	95.5	96.0	95.6	96.0	94.1	94.3	93.5	94.3	94.0	93.7	94.1	93.4	-0.7
	19-22	94.8	93.3	94.3	93.4	94.9	96.6	96.9	95.1	97.5	96.8	97.5	97.7	96.7	97.3	97.9	96.8	97.2	97.8	96.7	97.5	96.1	97.3	+1.2
	23-26					96.6	95.9	96.6	97.0	97.2	98.1	97.9	97.9	97.7	98.4	97.7	97.0	97.9	97.0	98.0	97.0	97.6	96.8	-0.7
	27-30									98.1	96.5	98.6	97.8	96.8	97.7	99.0	98.9	98.2	98.1	97.7	98.2	98.5	97.6	-0.9
Try barbiturates once or twice	18	83.9	82.4	84.4	83.1	84.1	84.9	86.8	89.6	89.4	89.3	90.5	90.6	90.3	89.7	87.5	87.3	84.9	86.4	86.0	86.6	85.9	85.9	0.0
	19-22	83.5	82.3	83.8	85.1	85.2	86.1	88.3	87.5	90.1	92.0	91.1	90.4	88.8	90.7	91.1	90.5	89.1	86.6	85.8	86.6	84.2	85.2	+1.0
	23-26					84	84.5	84.4	89.8	90.7	89.4	88.8	87.9	88.8	88.5	88.0	89.3	88.3	88.3	87.4	87.3	85.2	86.9	+1.7
	27-30									90.5	88.3	88.4	88.8	86.6	88.9	87.6	88.0	89.4	88.8	88.4	87.6	87.3	88.5	+1.1
Take barbiturates regularly	18	95.4	94.2	94.4	95.1	95.1	95.5	94.9	96.4	95.3	95.3	96.4	97.1	96.5	97.0	96.1	95.2	94.8	95.3	94.6	94.7	95.2	94.5	-0.7
	19-22	96.6	95.6	97.3	96.5	96.6	98.1	98.0	97.0	97.9	97.7	98.7	98.0	97.9	98.2	98.7	97.7	97.9	97.7	97.7	97.3	97.4	96.9	-0.5
	23-26					98.4	98.5	97.7	98.6	98.3	98.3	98.5	98.5	98.6	98.5	98.5	97.4	98.4	97.4	98.5	97.6	97.4	97.0	-0.4
	27-30									98.4	97.1	99.1	98.5	97.7	98.4	99.1	99.0	98.5	97.9	97.7	98.5	98.1	98.4	+0.3
Try one or two drinks of an alcoholic beverage (beer, wine, liquor)	18	16.0	17.2	18.2	18.4	17.4	20.3	20.9	21.4	22.6	27.3	29.4	29.8	33.0	30.1	28.4	27.3	26.5	26.1	24.5	24.6	25.2	26.6	+1.4
	19-22	14.8	14.5	13.9	15.5	15.3	15.4	16.9	16.0	18.4	22.4	17.6	22.2	16.9	20.8	22.2	22.0	22.0	18.3	21.5	18.3	18.4	16.3	-2.0
	23-26					17.4	16.1	13.2	17.7	13.7	17.5	18.6	19.5	17.4	18.1	17.6	16.5	18.0	15.8	18.6	19.1	19.9	15.9	-4.0
	27-30									19.5	19.1	18.7	18.8	17.9	19.5	18.6	18.2	16.1	17.4	15.2	15.9	14.8	15.9	+1.1
Take one or two drinks nearly every day	18	69.0	69.1	69.9	68.9	72.9	70.9	72.8	74.2	75.0	76.5	77.9	76.5	75.9	77.8	73.1	73.3	70.8	70.0	69.4	67.2	70.0	69.2	-0.8
	19-22	67.8	69.7	71.3	73.3	74.3	71.3	77.4	75.3	76.5	80.0	79.7	77.1	76.0	75.0	78.0	74.7	73.5	73.2	70.3	67.3	66.7	68.3	+1.6
	23-26					71.4	73.7	71.6	72.7	74.6	74.4	77.6	76.9	75.5	74.2	73.3	69.7	70.6	68.4	70.2	73.4	66.3	66.5	+0.2
	27-30									76.0	73.9	73.3	76.1	69.5	73.5	72.4	71.8	71.4	71.8	69.8	67.9	65.9	68.9	+3.0

(Table continued on next page)

TABLE 6-2 (cont.)

Trends in Proportions Disapproving of Drug Use

High School Seniors (Age 18) and Young Adults in Modal Age Groups of 19-22, 23-26, and 27-30

(Entries are percentages)

Q. Do you disapprove of people (who are 18 or older) doing each of the following?	Age Group	Percentage disapproving[a]																						'00-'01 change
		1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	
Take four or five drinks nearly every day	18	90.8	91.8	90.9	90.0	91.0	92.0	91.4	92.2	92.8	91.6	91.9	90.6	90.8	90.6	89.8	88.8	89.4	88.6	86.7	86.9	88.4	86.4	-2.0
	19-22	95.2	93.4	94.6	94.6	94.6	94.8	94.9	95.7	94.8	96.1	95.8	96.4	95.5	95.1	96.2	95.5	94.2	93.9	92.4	92.4	92.8	94.2	+1.4
	23-26					96.2	95.0	95.5	96.9	94.3	95.9	96.9	96.1	95.7	95.7	95.7	95.2	96.5	93.8	96.1	95.1	94.3	93.5	-0.8
	27-30									97.4	94.6	96.1	95.3	94.8	94.8	96.4	96.7	96.4	96.2	95.0	97.2	95.3	96.1	+0.8
Have five or more drinks once or twice each weekend	18	55.6	55.5	58.8	56.6	59.6	60.4	62.4	62.0	65.3	66.5	68.9	67.4	70.7	70.1	65.1	66.7	64.7	65.0	63.8	62.7	65.2	62.9	-2.3
	19-22	57.1	56.1	58.2	61.0	59.7	59.4	60.3	61.6	64.1	66.3	67.1	62.4	65.6	63.5	68.1	66.0	69.2	66.5	63.2	63.5	65.1	58.3	-6.7 s
	23-26					66.2	68.3	66.5	67.5	65.2	63.2	66.9	64.6	69.6	66.8	66.9	65.3	70.9	66.6	69.5	68.1	66.2	66.0	-0.2
	27-30									73.9	71.4	73.1	72.1	68.4	73.4	73.5	73.7	72.4	73.0	71.1	73.1	73.1	73.0	-0.1
Smoke one or more packs of cigarettes per day	18	70.8	69.9	69.4	70.8	73.0	72.3	75.4	74.3	73.1	72.4	72.8	71.4	73.5	70.6	69.8	68.2	67.2	67.1	68.8	69.5	70.1	71.6	+1.5
	19-22	68.7	68.1	66.3	71.6	69.0	70.5	71.4	72.7	73.8	75.6	73.7	73.2	72.6	72.8	75.3	69.8	72.2	74.3	72.3	70.1	73.1	73.2	+0.1
	23-26					69.9	68.7	67.5	69.7	66.4	71.1	71.5	77.2	73.6	72.9	70.3	72.2	73.0	71.7	73.9	73.8	72.7	77.3	+4.5
	27-30									72.8	69.4	73.5	71.2	70.7	73.8	72.3	73.9	72.7	74.3	71.7	71.0	78.6	75.2	-3.4
Approximate Weighted N=	*18*	*3261*	*3610*	*3651*	*3341*	*3254*	*3265*	*3113*	*3302*	*3311*	*2799*	*2566*	*2547*	*2645*	*2723*	*2588*	*2603*	*2399*	*2601*	*2545*	*2310*	*2150*	*2144*	
	19-22	*588*	*573*	*605*	*579*	*586*	*551*	*605*	*587*	*560*	*567*	*569*	*533*	*530*	*489*	*474*	*465*	*480*	*470*	*446*	*449*	*416*	*413*	
	23-26					*542*	*535*	*560*	*532*	*538*	*516*	*524*	*495*	*538*	*514*	*475*	*466*	*449*	*423*	*401*	*397*	*389*	*404*	
	27-30									*526*	*509*	*513*	*485*	*512*	*462*	*442*	*450*	*430*	*453*	*449*	*429*	*395*	*368*	

Source: The Monitoring the Future Study, the University of Michigan.

NOTES: Level of significance of difference between the two most recent years: s = .05, ss = .01, sss = .001. Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding.

'NA' indicates data not available.

[a] Answer alternatives were: (1) Don't disapprove, (2) Disapprove, and (3) Strongly disapprove. Percentages are shown for categories (2) and (3) combined.

Chapter 7

THE SOCIAL MILIEU FOR YOUNG ADULTS

In Volume I, we examined the extent to which secondary school students are exposed to drug use of various kinds, their perceptions of the relevant norms in their peer groups, and the extent to which they perceive various drugs to be available to them. We believe that all these factors are important influences on substance use, at both the individual (micro) level and the aggregate (macro) level. In this chapter, these factors are examined for the young adult population, many of whom are in social environments quite different from the ones to which they were exposed during their high school years.

Because each of these question sets is contained in only a single questionnaire form, and because the follow-up samples are much smaller than the in-school samples, the case counts are much lower than those discussed in most chapters. Therefore, the prevalence and trend estimates are more subject to fluctuation due to greater sampling error.

PEER NORMS AS PERCEIVED BY YOUNG ADULTS

Table 7-1 provides current levels and trends in perceived friends' disapproval of drug use among high school seniors, 19- to 22-year-olds, 23- to 26-year-olds, and 27- to 30-year-olds. (These are the same age groupings used in Chapter 6.) Trend data are available since 1980, 1984, and 1988, respectively, for the three four-year age groupings.

The questions about disapproval by the respondents' friends use the same answer scale (stated in terms of disapproval rates of different use levels of the various drugs) as do the questions that ask about the respondent's own attitudes about those behaviors (discussed in Chapter 6). The list of drug-using behaviors is shorter here, and the questions appear on a different questionnaire form and therefore have a different set of respondents. However, the results for perceived peer norms are generally quite consistent with those for personal disapproval; that is, the proportion saying that they personally disapprove of a drug-using behavior tends to be similar to the proportion saying that their close friends would disapprove of that same behavior. Exceptions are ***trying marijuana once or twice*** and ***smoking one or more packs of cigarettes per day***, to which respondents have consistently reported their friends' attitudes as *more* disapproving than their own attitudes (especially in the oldest age band), and ***heavy weekend drinking***, to which friends' attitudes are seen as considerably *less* disapproving than their own.

Current Perceptions of Friends' Attitudes

Table 7-1 provides trends in the proportions of respondents indicating how their close friends would feel about the respondents engaging in various drug-using behaviors, for each of the age bands. For purposes of simplification, we begin by addressing results across the whole 19- to 30-year age band (tabular data are not presented).

- The peer norms reported by young adults 1 to 12 years past high school are quite similar to those reported by high school seniors. That is, for each of the ***illicit drugs other than marijuana***, the great majority of young adults think that their close friends would disapprove of their even *trying* such drugs once or twice (85% for ***LSD*** and ***amphetamines*** and 89% for ***cocaine***).

- Well over half of the young adults (over 58%) now think their friends would disapprove of their even trying ***marijuana***, while two-thirds (66%) think they would disapprove of occasional use and about 85% think they would disapprove of regular use.

- Almost two-thirds (65%) of young adults say their friends would disapprove if they were ***daily drinkers***, and nearly 9 out of 10 (89%) if they were ***heavy daily drinkers***, defined as taking four or five drinks nearly every day.

- Friends' disapproval of occasional ***heavy drinking*** is distinctly lower. Only 47% to 59% of any age group think their friends would disapprove of their having five or more drinks once or twice each weekend. The 19- to 22-year-olds, who comprise the age group that exhibits the highest rate of such drinking, have the lowest level of perceived friends' disapproval; the two older age groups think that their friends would be considerably more disapproving.

- Peer disapproval of ***cigarette smoking*** is reasonably high in all four age bands: 75% of seniors say their friends would disapprove of pack-a-day smoking, as well as 74% of the 19- to 22-year-olds, 77% of the 23- to 26-year-olds, and 84% of the 27- to 30-year-olds. Clearly, anti-smoking norms are weakest among the younger age bands, and this has generally been the case since the late 1980s.

Trends in Peer Norms

- Important changes in the social acceptability of drug-using behaviors among both seniors' and young adults' peers have occurred over the life of this study. Among seniors, friends' disapproval of trying ***marijuana*** rose from 41% in 1979 to 73% in 1992. Friends' disapproval subsequently grew substantially in all of the young adult age bands. For example, among the 19- to 22-year-olds, the proportion thinking their friends would disapprove if they even tried marijuana rose from 41% in 1980 to 65% in 1992. A similar peaking occurred for the 23- to 26-year-olds around 1992, at 66%. In all age groups, disapproval subsequently declined—though the declines were greatest for the younger age groups. Among the twelfth graders the decline ended in 1997 and began to reverse, but it continued among the 19- to 26-year-olds.

Among those under age 23, friends' disapproval of more frequent use of marijuana also rose until the early 1990s and then declined between 1992 and 1999. The 19- to 26-year-olds have declined a bit further since then.

- There was a more gradual increase in peer disapproval levels of ***amphetamine*** use for all age groups through 1991, followed by definite declines evident among the high school seniors through 1996. As of 2001, levels among the 19- to 30-year-olds are about the same as they were 10 years earlier, in 1991.

- Through 1991 peer disapproval of trying ***LSD*** showed very little change in any of the age bands, but it fell some in the 1990s, especially among the 18-year-olds and subsequently the 19- to 22-year-olds. These declines bottomed out in a staggered fashion, beginning with the seniors in 1997 (who have since shown a 6 percentage point increase in peer disapproval).

- Perceived peer norms regarding ***cocaine*** use were first measured in 1986. During the next five years, self-reported cocaine use declined substantially as peer norms in all age bands shifted considerably toward disapproval. For example, by 1994, 95% of the 19- to 22-year-olds thought their friends would disapprove of their even trying cocaine. After 1994, peer norms against use continued to strengthen a bit in the upper age bands, perhaps through generational replacement, but weakened slightly in the younger age bands, likely reflecting a new cohort effect. At present there is very little difference by age in peer norms against cocaine use.

- Peer norms regarding ***occasional heavy drinking*** (five or more drinks once or twice each weekend) have tended to be weakest among the 19- to 22-year-old age stratum (where such behavior is most common) and strongest among the 27- to 30-year-old stratum. Among seniors, friends' attitudes became somewhat more restrictive between 1981 and 1992 but then leveled for a few years after that. There was a similar upward trend among the various young adult age bands, following a staggered pattern likely reflecting a cohort effect. However, in recent years the 19-22 age group has become less disapproving of binge drinking.

- Peer norms regarding ***cigarette smoking*** (one or more packs per day) became somewhat more restrictive among high school seniors in the early years of this study; peer disapproval rose from 64% in 1975 to 73% in 1979. There was little further net change through 1992, when friends' disapproval stood at 76%. However, peer disapproval of smoking slipped some in the 1990s, to 69% by 1995, where it remained through 1998 among seniors, before beginning to rise once again. Between 1982 and 1992, peer disapproval among 19- to 22-year-olds also rose just a bit, from 75% to 79%, but then it also dropped (to 69% by 1998). It stands at 74% in 2001, following some recent increase in disapproval of smoking. Among 23- to 26-year-olds, peer disapproval increased a bit from 74% in 1984, to 83% by 1991, but dropped back to 77% by 2001. Despite substantial publicity about changing norms and new laws restricting smoking, there was rather little change in rates of perceived peer disapproval of cigarette smoking for some years, particularly among those of high school and college ages; and in the 1990s, rates of disapproval actually declined some in all of these age groups. In fact, they reached their lowest levels in 20 years among high school and college-aged respondents by 1995.

EXPOSURE TO DRUG USE BY FRIENDS AND OTHERS

Exposure to drug use is measured by two sets of questions, each appearing on a (different) single questionnaire form. The first set asks each respondent to estimate what proportion of his or her friends use each drug, while the second asks, "During the LAST TWELVE MONTHS how often were you around people who were using each of the following to get high or for 'kicks'?" The same questions are asked of high school seniors, and their results are included here for comparison purposes in Tables 7-2 and 7-3. We continue to deal with four-year age bands to increase the reliability of the measures. At the bottom of each table is a summary of the weighted numbers of cases upon which each annual estimate is based. (The actual numbers of cases are somewhat higher.)

Exposure to Drug Use Among Young Adults

- Relatively high proportions of young adults in all of these age bands have at least *some* friends who use ***some illicit drugs*** (Table 7-2). In recent years, the proportion declines considerably with age, although this was not always the case. The differences opened up considerably in the 1990s. In 2001, the proportion is highest for high school seniors (83%) and falls to 57% among the 27- to 30-year-olds. The proportions who say that *most or all* of their friends use one or more of the illicit drugs fall from 25% for seniors, to 20% for 19- to 22-year-olds, to 10% for 23- to 26-year-olds, to only 7% among 27- to 30-year-olds—quite a dramatic difference. It is also one that is consistent with the large differences in their own self-reported use.

- With regard to ***illicit drugs other than marijuana***, taken as a whole, considerably fewer report *any* of their friends so involved: 55% for seniors, 60% for 19- to 22-year-olds, 43% for 23- to 26-year-olds, and 34% for 27- to 30-year-olds. These age differences are considerably greater than they were throughout the 1980s. During the period of increasing drug use primarily among adolescents, the seniors reported having the highest proportion of friends using drugs. However, as those seniors have aged, it is now the young adults aged 19 to 22 who are showing an increasing proportion of friends using, as well as the highest proportion of any of the age strata. The proportions saying that *most or all* of their friends use ***illicit drugs other than marijuana*** in 2001 are 7%, 8%, 4%, and 3%, respectively, for the four age bands.

- With respect to individual illicit drugs, exposure among all of the age groups is greatest for ***marijuana***, with 81% of the seniors, 78% of the 19- to 22-year-olds, 65% of the 23- to 26-year-olds, and 57% of the 27- to 30-year-olds reporting that at least some of their friends use the drug. The next highest exposures are for ***MDMA*** (42% among seniors and 43% among 19- to 22-year-olds, declining to 18% among 27- to 30-year-olds), ***LSD*** (32% among seniors and 28% among 19- to 22-year-olds, declining to 13% among 27- to 30-year-olds), ***cocaine*** (27% among seniors as well as among 19- to 22-year-olds, declining to 20% in the oldest age band), and ***amphetamines*** (33% among seniors and 28% among 19- to 22-year-olds, declining to 13% among 27- to 30-year-olds). Because of the dramatic increase in its use during the 1990s and early 2000s, MDMA, or ecstasy, has surpassed a number of the more traditional drugs.

The proportions of young adults who have some friends who use the other illicit drugs exceed 10% in at least one of the young adult age groups for the following drugs: ***hallucinogens other than LSD*** (15%-34%), ***narcotics other than heroin*** (11%-23%), ***tranquilizers*** (10%-21%), ***steroids*** (11%-20%), ***barbiturates*** (8%-19%), ***crack cocaine*** (7%-17%), ***quaaludes*** (5%-15%), and ***inhalants*** (6%-14%). The lowest is ***heroin*** (4%-9%).

- For most illicit drugs, the proportion of young adults having any friends who use decreases with age, consistent with the age differentials in self-reported use. The steepest declines occur with ***inhalants*** (22% of 18-year-olds down to 6% of 27- to 30-year-olds).

- For some years, ***cocaine*** was the one illicit drug that showed significantly higher rates of active use among adults than among high school seniors. That is no longer true, although there is still rather little drop-off with age in early adulthood; consequently, there is not a great difference associated with age in having friends who use cocaine (19% to 27% for all four age groups).

- For ***crack***, however, the story is different. Use now descends sharply with age, although this was not true in the mid-1980s, when measures of crack use were first included in the surveys.

- In general it appears that some respondents who report that their friends use illicit drugs are not directly exposed to that use themselves, judging by the differences in proportions saying they have some friends who use (Table 7-2) and the proportions who say they have not been around people who were using during the prior year (Table 7-3).

- With respect to ***alcohol*** use, the great majority of young adults have at least *some* friends who ***get drunk at least once a week***, although this differs by age: 80% of the high school seniors, 82% of the 19- to 22-year-olds, 75% of the 23- to 26-year-olds, and 65% of the 27- to 30-year-olds. The proportions who say *most or all* of their friends get drunk once a week differ more substantially by age: 33% of the seniors, 30% of the 19- to 22-year-olds, 19% of the 23- to 26-year-olds, and 12% of the 27-

to 30-year-olds. Note in particular how high these rates are among the high school and college-aged respondents.

In terms of direct exposure during the past year to people who were drinking alcohol "to get high or for 'kicks,'" having some such exposure is almost universal in these four age groups: 91%, 94%, 90%, and 91%, respectively. (See Table 7-3.)

- In each of these four age groups, nearly all respondents (85%-91%) have at least a few friends who ***smoke cigarettes***, with some falloff after age 22. Focusing on the other end of the scale, a quarter of the seniors and 19- to 22-year-olds (25% and 27%, respectively) state that ***most or all*** of their friends smoke. Above those ages the proportions decline sharply, to 16% of the 23- to 26-year-olds and 10% of the 27- to 30-year-olds. This increase in the segregation of smokers from nonsmokers may reflect the stratification of young people after high school as a function of educational attainment, which is highly correlated with cigarette smoking. Also, it can be seen in Table 7-2 that there was much less age-related difference in the late 1980s, suggesting that the sharp rise in smoking among high school students accentuated the age differentials.

Trends in Exposure to Drug Use by Young Adults

Tables 7-2 and 7-3 also provide *trend* data on the proportions of friends using drugs and the proportions directly exposed to drug use. Once again, trends are available for the 19- to 22-year-olds since 1980, for the 23- to 26-year-olds since 1984, and for the 27- to 30-year-olds since 1988. Data for high school seniors since 1980 also have been included in these tables for comparison purposes.

- An examination of Table 7-3 shows that exposure to illicit drug use in the past 12 months has been progressively decreasing at higher ages for ***any illicit drug***, ***marijuana***, and ***any illicit drug other than marijuana***, as well as for nearly all of the specific illicit drugs. In general, these differences replicate across different historical periods, with the exception of cocaine, which has only begun to show a decline in exposure with increasing age after 1996.

- Until 1992, young adults' trends in exposure to use tended to parallel those observed for twelfth graders. Between 1980 and 1992, that meant a decreasing number of respondents were exposed to ***any illicit drug*** use (Table 7-3) or reported any such use in their own friendship circle (Table 7-2). Since 1992, however, an important *divergence* in trends among age groups has emerged: twelfth graders have shown a substantial increase in both friends' use and exposure to use (and in self-reported use); the 19- to 22-year-olds showed a similar rise but lagged by a few years; the 23- to 26-year-olds have recently shown a slight rise, while the oldest age band of young adults has shown practically no change. This pattern no doubt reflects the emergence of lasting cohort differences combined with the process of generational replacement.

- ***Marijuana*** showed a very similar pattern of change. In addition, it is particularly noteworthy that, while 34% of the 19- to 22-year-olds in 1980 said *most or all* of their friends used marijuana, only 9% said the same in 1993. Clearly the number of friendship groupings in which marijuana use is widespread dropped dramatically over that interval. The figure has increased to 19% by 1999, where it remains in 2001.

- The proportion exposed to use of ***any illicit drugs other than marijuana*** began to decline after 1982. By 1991 there had been a considerable drop in such exposure in all four age groups. This drop appears to be due to decreases in exposure to the use of ***cocaine*** and ***amphetamines*** particularly, although there were decreases for ***barbiturates*** and ***tranquilizers***, as well. The levels then began to rise in the two youngest age bands, while at the same time they continued to decline in the two oldest age bands, opening up a large age-related difference in exposure to use.

- Between 1987 and about 1992, there was a considerable drop in the proportion of all four age groups who said they had any friends who used ***crack***. (Self-reported use declined in the same period.) Since then the rates of friends' use have increased some in the two youngest age bands and decreased some in the two oldest ones, resulting in a large age difference in the proportion of friends using crack. Of course, some of that apparent age difference could be due to a greater amount of cumulative attrition of the most drug-prone members of our panels, and crack users would certainly be among the most drug prone.

- It is noteworthy that there has been a substantial increase since the early 1990s in the proportion of seniors and 19- to 22-year-olds reporting that they have friends using ***narcotics other than heroin***. Increases among the 23- to 30-year-olds have been more modest.

- For all four age groups there were modest declines between 1987 and 1992 in the proportion saying that most or all of their friends drink ***alcohol***. Since 1992, there has been very little change in all four age bands.

- Among high school seniors, the proportion who said most or all of their friends smoked ***cigarettes*** declined appreciably between 1975 and 1981, during the same period that self-reported use declined, after which neither measure showed much change until about 1992. Thereafter, substantial increases in both measures occurred. By 1997 fully one-third (34%) of high school seniors reported that most or all of their friends smoked cigarettes, up from 21% in 1992. (Both measures have shown some decline since.) Among 19- to 22-year-olds a decline in friends' use occurred between 1980 (or possibly earlier) and 1985, followed by a leveling through 1994. The percentage saying most friends smoke increased from 22% in 1994 to 27% in 2001. Among 23- to 26-year-olds, a downturn was evident between at least 1984 (the first year for which data are available) and 1988, and then reported friends' use leveled. These staggered changes illustrate that the "cohort effects" are moving up the age spectrum along with the cohorts.

- Nearly all of these changes across the various drugs parallel changes in self-reported use by these four age groups. This pattern reinforces our trust in the validity of the self-report data, since there would presumably be less motivation to distort answers about the proportion of an unnamed set of friends who use a drug than about one's own use of it.

PERCEIVED AVAILABILITY OF DRUGS BY YOUNG ADULTS

Young adults participating in the follow-up survey receive identical questions to those asked of high school seniors regarding how difficult they think it would be to get each of the various drugs if they wanted them. The questions are contained in only one of the six questionnaire forms, yielding a weighted sample size for each four-year age band of about 400 to 600 cases per year. The data for the follow-up samples, which are grouped into the same four-year age bands, are presented in Table 7-4, along with the data for the twelfth graders. Sample sizes are presented at the bottom of Table 7-4.

Perceived Availability

- As was true with the high school seniors, substantial proportions of the American young adult population have access to various illicit drugs. (We do not ask about access to alcohol and cigarettes, because we assume access to be universal.)

- ***Marijuana*** is the most available illicit drug, with 85%-92% of the young adult age strata saying it would be "fairly easy" or "very easy" to get. Access is highest among the 19- to 22-year-olds (92%) and lowest among the 27- to 30-year-olds (85%), which was not the case in the 1980s.

- ***Amphetamines*** are the next most available illicit drug (49%-57%), with access declining with ascending age in most recent years.

- ***Cocaine*** ranks next among young adults, with 45%-50% saying it would be fairly easy to get. ***Powdered cocaine*** availability does not differ by age (43%-44%). ***Crack*** is available to somewhat smaller proportions than powdered cocaine—37% for all three post-high school age strata. Cocaine was considerably more available to the older age groups in the 1980s but is now about equally available across all four age bands.

- ***LSD*** shows a fairly high degree of availability among high school seniors and 19- to 22-year-olds (43%-45%), then decreases with age to 38% for the 27- to 30-year-olds. This decrease with age was generally not true in the early to mid-1980s

- ***Ecstasy*** (***MDMA***) is now the most widely available of all of the illicit drugs, other than marijuana. Again, its availability is greatest for high school seniors at 62%, but only slightly lower among 19- to 22-year-olds (56%) and 23- to 26-year-olds (52%). However, availability then falls off considerably among 27- to 30-year-olds (to 41%).

- ***Hallucinogens other than LSD*** are reported as less available than LSD: 38%-46% in the three young adult strata and 49% of twelfth graders say they could get them fairly easily.

- ***Barbiturates*** and ***tranquilizers*** are reported as available by sizeable proportions of young adults. Some 36%-39% say they could get barbiturates (compared with 36% of seniors), and 35%-43% say they could get tranquilizers (versus 33% of seniors). The availability of tranquilizers has generally tended to increase some with age over most of the life of the study.

- Over a quarter of young adults (27%-30%) say that they could get ***heroin*** fairly easily (versus 32% of twelfth graders). The seniors have slightly higher availability than the other age groups, but there is little difference among the latter.

- More than a third of young adults (36%-44%) say they can get ***other narcotics*** fairly easily (versus 41% of high school seniors). Availability declines some with age.

- ***Crystal methamphetamine*** (*ice*) is perceived to be available by about a quarter of each age group (26%-28%).

- ***Steroids*** show some declines in perceived availability with increasing age, as has generally been the case, ranging from 44% among high school seniors down to 35% among the 23- to 30-year-olds.

Trends in Perceived Availability

- ***Marijuana*** has been almost universally available to all these age groups throughout the historical periods covered by the available data (since 1975 in the case of high school seniors). There was a slight decrease through 1991 among high school seniors since the peak year of 1979 and a slightly larger decrease from 1980 through 1991 among 19- to 22-year-olds. Availability has risen some in nearly all strata since 1993, though by very little among the young adults. Perceived availability is now a bit higher for the younger age groups (89% for seniors and 92% for 19- to 22-year-olds versus 85% for those aged 27 to 30)—a reversal of the situation in the late 1980s.

- ***Cocaine*** availability moved up among all three younger age strata over the 1984-1988 interval, reaching historic highs in 1988 and 1989. (High school seniors showed a rise in availability in earlier years—from 1975 to 1980—followed by a leveling between 1980 and 1985. Availability was level during the latter period among 19- to 22-year-olds, also.) From a policy perspective, it is worth noting that in all three age bands for which we have data, the perceived availability of cocaine *increased* in 1987—the same year that use actually dropped sharply. Between 1988 and 1989, in the two younger age strata (aged 18, and 19 to 22) the proportions who believed that they could get cocaine fairly easily were still increasing, whereas in the older age strata the proportions were beginning to decrease. In 1990 and 1991, all four groups reported decreased availability—quite parallel to the number who had friends who were users and to personal use, both of which dropped substantially in these years and then leveled in 1992. Perceived availability of cocaine dropped to between 49% and 57% for all four age groups in 1993, with the absolute declines ranging from 4 to 7 percentage points. Since then there has been some falloff in perceived availability in the two oldest strata only.

- ***Crack*** availability peaked in 1988-1989 for all age groups (it was first assessed in 1987) and declined through 1992, with little further change until 1995. Since 1995, crack availability has held fairly stable among seniors and 19- to 22-year-olds but has declined in the two oldest strata. In the late 1980s, crack was most available to the older age strata, but the opposite is now true.

- The trends in ***LSD*** availability among young adults have some parallels to those for twelfth graders. Among twelfth graders, there was a drop of about 10 percentage points in the mid-1970s and a later drop in the interval 1980 to 1986. The latter drop, at least, was paralleled in the data from 19- to 22-year-olds. After 1986, availability increased considerably in all age bands, reaching its peak levels (the highest we have recorded since these questions were introduced) in 1995; since 1995, availability has fallen some in the youngest two age strata, narrowing the differences among these several age groups.

- In the early 1980s, there was a fair decline among all age groups in the availability of ***hallucinogens other than LSD***; there was little additional change through 1992. From 1992 to 1995 the three youngest age groups all showed an increase in availability, with seniors showing the largest increase. From 1996 to 2000, availability was fairly steady. All age groups showed substantial increases in 2001, but this is presumably due to the changed question wording in which, among other things, "shrooms" was added to the examples of hallucinogens.

- The availability of ***MDMA*** (***ecstasy***) rose very substantially in all of these age groups during the 1990s. (The questions were first introduced in 1989 and 1990.) Among the high school seniors, reported availability nearly tripled, from 22% in 1989 to 62% in 2001. All four age groupings showed sharp increases in 2000 and again in 2001. The 27- to 30-year-olds are the least likely to say that they have ecstasy readily available; still, 41% of them say it would be fairly easy to get.

- ***Heroin*** availability varied within a fairly narrow range from 1980 to 1986 but then showed a fair-sized increase among both high school seniors and young adults through 1990. It then rose further among seniors and 19- to 22-year-olds through 1995 before easing back some. In the older two age groups, ***heroin*** availability remained fairly flat from 1990 to 1995 but then increased some through 1999. What is clear is that ***heroin*** was much more available to all of these age groups in the 1990s than it was in the 1980s. All of the young adult groups (but not the seniors) showed a decline in 2000 in the availability of heroin; availability changed little in 2001.

- The availability of ***narcotics other than heroin*** slowly rose among all age groups between 1980 and 1989, followed by considerable stability from 1989 through 1994. Since 1994 availability has generally increased slightly, as use has been rising steadily.

- The reported availability of ***amphetamines*** peaked in 1982 for both twelfth graders and 19- to 22-year-olds; since then it has fallen by 14 percentage points among twelfth graders and 17 percentage points among the 19- to 22-year-olds. Since 1984, when data were first available, there has been a decline of 16 percentage points among the 23- to 26-year-olds, as well. For the 27- to 30-year-olds, reported availability decreased by 5 percentage points between 1988 and 2001.

- ***Barbiturates*** have exhibited a long-term decline in availability since about 1981 or 1982 in the two younger groups—by 20 percentage points among high school seniors and 18 percentage points among 19- to 22-year-olds. Since 1984, when data were first available for 23- to 26-year-olds, availability has declined by 17 percentage points. There also has been a decline for 27- to 30-year-olds of about 5 percentage points since 1988.

- ***Tranquilizer*** availability has declined long term by more than half among high school seniors, from 72% in 1975 to 33% in 2001. Since 1980, when data were first available for 19- to 22-year-olds, availability declined more sharply and from a higher level (from 67% to 35% in 2001) than among seniors, such that previous differences in availability between them were eliminated by 1992. The older age groups also showed a considerable decline in the availability of tranquilizers through 2001. In general the trend lines for the different age groups have been quite parallel (as was true for barbiturates).

- Data on ***steroid*** availability were first gathered in 1990, and, although there has not been much change in availability since then, availability did appear to peak in 1992 in all age strata. This was followed by a modest decline in all age groups. Seniors showed some increase between 1996 and 1998 but little change since.

TABLE 7-1

Trends in Proportions of Friends Who Disapprove of Drug Use

High School Seniors (Age 18) and Young Adults in Modal Age Groups of 19-22, 23-26, and 27-30

(Entries are percentages)

Q. How do you think your close friends feel (or would feel) about you...	Age	Percentage saying friends disapprove[a]																						
	Group	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00-'01 change
Trying marijuana once or twice	18	42.6	46.4	50.3	52.0	54.1	54.7	56.7	58.0	62.9	63.7	70.3	69.7	73.1	66.6	62.7	58.1	55.8	53.0	53.8	55.1	58.1	57.6	-0.5
	19-22	41.0	40.6	46.9	47.1	51.6	54.5	55.2	54.7	58.7	63.0	63.6	64.7	64.7	63.4	63.7	58.5	64.3	58.4	57.0	56.5	56.0	54.2	-1.7
	23-26					47.7	47.0	49.1	53.9	58.2	62.6	61.3	64.5	65.6	65.5	63.2	63.8	61.2	59.3	66.5	62.6	64.6	55.2	-9.4 ss
	27-30									58.6	58.7	61.4	64.6	63.5	64.4	66.3	66.1	65.8	65.0	65.4	61.8	63.9	64.9	+1.0
Smoking marijuana occasionally	18	50.6	55.9	57.4	59.9	62.9	64.2	64.4	67.0	72.1	71.1	76.4	75.8	79.2	73.8	69.1	65.4	63.1	59.9	60.4	61.6	63.9	64.3	+0.4
	19-22	50.9	49.2	54.0	57.9	59.4	64.6	64.4	65.1	69.8	71.5	74.1	73.9	74.3	73.1	73.0	66.6	71.3	65.1	65.1	64.6	61.8	61.0	-0.8
	23-26					54.3	56.4	57.1	63.1	68.1	73.2	71.8	72.5	75.3	73.5	72.2	70.7	70.8	68.5	73.6	70.2	70.9	63.9	-7.1 s
	27-30									67.8	69.4	71.9	73.7	76.0	75.1	76.4	73.8	75.6	72.4	74.9	74.5	75.0	74.2	-0.9
Smoking marijuana regularly	18	72.0	75.0	74.7	77.6	79.2	81.0	82.3	82.9	85.5	84.9	86.7	85.9	88.0	83.5	80.6	78.9	76.1	74.1	74.7	74.5	76.1	77.8	+1.7
	19-22	70.3	75.2	75.7	79.5	80.0	82.7	83.5	84.8	86.9	87.5	89.1	88.4	89.1	87.6	85.9	83.9	84.5	83.3	81.1	78.2	78.5	80.0	+1.5
	23-26					77.8	78.4	80.9	82.0	85.8	89.2	88.1	87.9	90.3	89.1	88.8	84.9	89.5	85.6	87.1	86.8	86.9	83.7	-3.2
	27-30									85.4	86.0	88.4	89.2	88.7	88.2	88.9	89.7	89.6	87.8	90.8	89.2	91.6	90.1	-1.5
Trying LSD once or twice	18	87.4	86.5	87.8	87.8	87.6	88.6	89.0	87.9	89.5	88.4	87.9	87.9	87.3	83.5	83.4	82.6	80.8	79.3	81.7	83.2	84.7	85.5	+0.8
	19-22	87.4	90.5	88.0	89.3	89.3	91.1	90.5	91.8	90.8	91.2	89.1	89.9	87.2	87.7	87.9	84.6	85.3	83.6	81.7	82.0	82.1	85.2	+3.1
	23-26					87.4	90.8	88.6	89.8	88.9	91.0	90.1	92.4	88.9	87.7	86.3	85.3	88.5	85.4	87.6	84.5	85.3	82.8	-2.5
	27-30									88.8	89.7	92.3	91.1	91.4	89.9	91.2	89.7	89.3	88.5	88.7	88.4	85.6	87.4	+1.8
Trying cocaine once or twice	18							79.6	83.9	88.1	88.9	90.5	91.8	92.2	91.1	91.4	91.1	89.2	87.3	88.8	88.7	90.2	89.3	-0.8
	19-22							76.4	NA	84.8	87.7	89.2	92.3	91.9	92.4	94.7	91.7	91.5	91.8	90.0	91.2	89.4	89.1	-0.3
	23-26							70.8	NA	81.4	84.5	84.1	86.7	87.4	87.7	87.9	90.4	90.0	91.1	92.0	89.6	90.5	88.0	-2.5
	27-30									81.8	81.1	83.7	83.5	84.4	86.1	87.8	87.5	88.7	89.4	89.3	90.5	90.4	89.3	-1.1
Taking cocaine occasionally	18							87.3	89.7	92.1	92.1	94.2	94.7	94.4	93.7	93.9	93.8	92.5	90.8	92.2	91.8	92.8	92.2	-0.6
	19-22							84.9	NA	91.0	93.8	94.2	95.6	95.9	95.6	97.5	95.6	95.7	96.6	93.1	95.7	94.7	94.5	-0.2
	23-26							81.7	NA	88.2	91.5	92.4	94.1	93.8	93.5	94.3	94.6	95.4	95.1	95.2	95.2	96.7	94.7	-2.0
	27-30									87.7	89.5	90.0	92.2	92.3	92.8	94.6	94.1	94.6	94.2	96.1	95.4	95.9	94.2	-1.7
Trying an amphetamine once or twice	18	78.9	74.4	75.7	76.8	77.0	77.0	79.4	80.0	82.3	84.1	84.2	85.3	85.7	83.2	84.5	81.9	80.6	80.4	82.6	83.0	84.1	83.8	-0.3
	19-22	75.8	76.7	75.3	74.3	77.0	79.7	81.5	81.3	83.0	83.5	84.5	86.5	83.8	85.0	87.2	83.1	86.0	84.5	84.0	85.8	81.6	84.5	+2.9
	23-26					78.4	79.1	76.7	81.7	83.0	85.6	84.3	85.0	83.6	84.2	84.7	87.6	86.5	83.3	87.0	85.9	85.1	83.1	-2.0
	27-30									82.7	84.1	84.9	84.6	84.7	84.1	85.9	85.5	85.6	85.9	85.8	87.2	87.8	86.4	-1.4
Taking one or two drinks nearly every day	18	70.5	69.5	71.9	71.7	73.6	75.4	75.9	71.8	74.9	76.4	79.0	76.6	77.9	76.8	75.8	72.6	72.9	71.5	72.3	71.7	71.6	73.4	+1.7
	19-22	71.9	72.1	68.6	73.5	71.6	72.2	72.7	70.2	73.9	77.1	73.3	73.7	74.0	71.2	73.0	68.3	68.9	73.5	67.3	68.6	66.6	64.9	-1.6
	23-26					63.6	66.8	67.7	68.3	69.2	70.8	72.7	72.5	72.1	67.6	71.5	68.2	72.8	68.1	66.9	66.1	65.4	64.4	-1.0
	27-30									71.0	68.0	70.4	71.9	68.8	73.2	70.9	68.8	65.7	67.3	66.7	64.3	67.3	67.1	-0.2

(Table continued on next page)

TABLE 7-1 (cont.)

Trends in Proportions of Friends Who Disapprove of Drug Use

High School Seniors (Age 18) and Young Adults in Modal Age Groups of 19-22, 23-26, and 27-30

(Entries are percentages)

Q. How do you think your close friends feel (or would feel) about you...	Age Group	Percentage saying friends disapprove[a]																						'00-'01 change
		1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	
Taking four or five drinks nearly every day	18	87.9	86.4	86.6	86.0	86.1	88.2	87.4	85.6	87.1	87.2	88.2	86.4	87.4	87.2	85.2	84.1	82.6	82.5	82.8	82.2	82.8	84.4	+1.7
	19-22	93.7	91.7	89.9	91.9	91.7	92.5	91.5	90.8	90.4	92.5	89.9	91.7	92.6	89.6	90.1	88.8	88.1	90.0	85.9	87.9	86.6	84.6	-2.0
	23-26					90.8	90.2	92.5	92.8	93.7	92.1	92.1	92.4	91.1	93.1	92.1	92.2	92.6	90.7	93.7	89.9	92.5	91.1	-1.4
	27-30									92.8	92.0	92.9	92.7	92.7	93.9	94.0	92.9	91.9	93.8	92.1	95.3	92.4	91.2	-1.2
Having five or more drinks once or twice each weekend	18	50.6	50.3	51.2	50.6	51.3	55.9	54.9	52.4	54.0	56.4	59.0	58.1	60.8	58.5	59.1	58.0	57.8	56.4	55.5	57.6	57.7	57.8	+0.1
	19-22	53.5	51.7	51.7	53.3	50.8	53.3	47.0	49.4	50.5	56.8	53.1	51.4	53.6	51.9	54.4	55.5	52.1	56.4	52.8	51.8	45.2	47.4	+2.3
	23-26					53.8	57.3	61.0	57.2	58.8	57.5	55.1	56.8	58.4	57.6	61.4	58.9	58.4	55.6	60.0	54.5	56.6	56.9	+0.4
	27-30									61.9	65.1	66.3	68.2	66.2	66.7	63.7	64.6	61.6	64.0	63.0	57.7	65.8	58.8	-7.0 s
Smoking one or more packs of cigarettes per day	18	74.4	73.8	70.3	72.2	73.9	73.7	76.2	74.2	76.4	74.4	75.3	74.0	76.2	71.8	72.4	69.2	69.3	68.5	69.0	71.2	72.6	74.5	+1.9
	19-22	75.6	75.1	75.4	78.5	76.2	79.7	77.7	78.6	80.2	78.4	77.5	78.3	79.0	76.0	73.8	70.9	73.9	76.5	69.2	73.9	71.1	74.3	+3.2
	23-26					73.9	77.3	80.3	80.5	79.5	80.5	78.5	83.3	82.3	77.4	80.1	78.8	78.3	75.8	76.5	78.0	79.9	77.0	-2.9
	27-30									81.2	80.9	82.9	84.5	83.1	86.8	82.5	83.4	81.9	80.5	81.9	82.6	84.0	83.6	-0.5
Approximate Weighted N=	*18*	*2766*	*3120*	*3024*	*2722*	*2721*	*2688*	*2639*	*2815*	*2778*	*2400*	*2184*	*2160*	*2229*	*2220*	*2149*	*2177*	*2030*	*2095*	*2037*	*1945*	*1775*	*1862*	
	19-22	*569*	*597*	*580*	*577*	*582*	*556*	*577*	*595*	*584*	*555*	*559*	*537*	*520*	*510*	*470*	*480*	*471*	*466*	*436*	*430*	*379*	*402*	
	23-26					*510*	*548*	*549*	*540*	*510*	*513*	*516*	*516*	*507*	*481*	*463*	*445*	*436*	*419*	*425*	*394*	*398*	*378*	
	27-30									*483*	*518*	*479*	*480*	*451*	*451*	*457*	*439*	*439*	*422*	*440*	*397*	*394*	*374*	

Source: The Monitoring the Future Study, the University of Michigan.

NOTES: Level of significance of difference between the two most recent years: s = .05, ss = .01, sss = .001. Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding.

[a] Answer alternatives were: (1) Don't disapprove, (2) Disapprove, and (3) Strongly disapprove. Percentages are shown for categories (2) and (3) combined.

TABLE 7-2

Trends in Proportions of Friends Using Drugs

High School Seniors (Age 18) and Young Adults in Modal Age Groups of 19-22, 23-26, and 27-30

(Entries are percentages)

Q. How many of your friends would you estimate...	Age Group	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00-'01 change
Take any illicit drug[a]																								
% saying any friends	18	87.5	85.4	86.3	82.6	81.0	82.4	82.2	81.7	79.1	76.9	71.0	69.1	67.3	71.0	78.3	78.6	80.6	83.4	84.6	82.0	82.0	82.8	+0.7
	19-22	90.2	88.0	86.8	85.0	82.3	82.9	80.5	76.7	77.2	78.4	72.7	71.5	66.8	71.7	71.6	71.6	76.2	77.2	79.8	77.3	83.1	81.1	-2.0
	23-26					83.6	82.7	80.3	80.9	74.4	73.8	65.8	63.0	67.3	64.6	66.7	65.3	64.6	67.0	67.6	67.9	67.8	66.9	-0.9
	27-30									74.8	72.9	69.6	67.1	61.5	60.2	57.1	58.5	59.1	60.9	58.3	59.6	55.6	57.2	+1.6
% saying most or all	18	32.5	29.8	26.5	23.8	20.9	22.7	21.5	18.6	15.8	15.7	11.6	11.7	12.0	15.5	20.3	21.7	23.8	23.7	25.9	25.5	24.5	25.2	+0.8
	19-22	34.9	32.8	28.1	22.4	21.9	18.2	16.2	14.0	13.5	10.9	10.5	8.8	9.0	10.4	14.9	13.1	17.3	16.2	16.8	20.6	18.9	20.3	+1.4
	23-26					19.6	15.4	16.2	11.7	9.5	9.7	9.5	7.4	6.2	6.4	8.7	7.6	8.8	10.5	9.6	8.4	9.7	10.4	+0.7
	27-30									8.6	6.4	5.9	2.9	5.8	5.0	5.6	6.1	3.6	4.5	5.3	5.7	5.3	7.1	+1.7
Take any illicit drug[a] other than marijuana																								
% saying any friends	18	62.4	63.3	64.7	61.2	61.3	61.8	63.3	62.4	56.5	56.2	50.1	46.3	47.1	48.7	53.7	53.7	54.5	55.1	55.6	51.2	52.5	55.0	+2.5
	19-22	67.9	67.8	66.7	65.2	60.8	62.1	61.0	57.3	53.5	60.8	53.4	51.5	45.3	51.4	46.3	46.4	46.5	49.7	53.3	54.8	56.1	60.0	+3.9
	23-26					63.7	64.0	59.0	61:1	55.1	54.2	47.8	41.8	46.1	42.3	39.4	40.3	32.8	35.1	35.4	41.1	42.5	42.6	0.0
	27-30									55.9	55.0	49.7	47.2	37.7	38.5	33.9	37.7	36.4	33.9	34.1	35.2	31.7	33.5	+1.8
% saying most or all	18	11.1	11.9	10.9	11.0	10.3	10.4	10.3	9.2	6.9	7.7	5.1	4.6	5.3	7.1	7.1	7.7	8.9	7.0	8.9	7.4	7.4	7.0	-0.4
	19-22	9.8	12.9	11.8	9.8	9.3	8.6	7.6	5.0	5.3	4.0	3.2	2.6	3.3	4.0	4.4	3.5	6.2	4.1	4.3	5.1	7.7	8.0	+0.3
	23-26					10.6	6.6	8.6	5.2	3.9	4.2	3.4	1.6	1.8	2.8	2.5	1.9	1.9	2.6	2.8	2.2	3.8	3.7	-0.1
	27-30									4.6	3.0	2.8	1.0	1.4	1.5	1.5	1.5	0.9	1.2	0.9	1.3	1.5	2.6	+1.1
Smoke marijuana																								
% saying any friends	18	86.4	83.0	84.4	80.3	77.7	79.5	79.2	78.4	75.3	72.5	68.3	65.8	63.1	67.4	75.6	76.1	78.0	81.4	83.2	80.7	80.5	81.2	+0.7
	19-22	88.8	86.4	85.2	83.8	81.6	81.1	78.5	75.3	75.1	73.8	67.6	68.0	63.5	67.6	67.4	68.8	74.9	74.7	77.2	73.9	81.2	78.4	-2.9
	23-26					82.0	80.8	77.7	79.4	71.6	69.8	61.8	59.6	61.3	61.2	62.6	63.2	62.6	63.5	65.0	64.4	64.8	64.5	-0.2
	27-30									71.8	68.2	65.1	62.6	58.0	57.4	52.3	55.7	55.1	58.3	55.5	57.0	51.7	56.5	+4.8
% saying most or all	18	31.3	27.7	23.8	21.7	18.3	19.8	18.2	15.8	13.6	13.4	10.1	10.0	10.3	13.9	18.9	20.7	22.2	22.5	23.8	24.2	23.2	24.0	+0.9
	19-22	34.1	30.6	25.6	20.6	19.4	16.0	13.3	12.5	12.2	9.0	9.2	8.3	8.2	8.5	13.0	12.5	16.3	16.2	16.4	19.4	16.6	18.5	+1.8
	23-26					17.0	14.3	13.7	10.4	7.8	8.6	8.3	6.9	5.6	5.6	7.5	6.6	8.2	9.8	9.0	8.5	8.2	9.0	+0.8
	27-30									6.8	4.4	4.0	2.8	5.1	5.2	5.0	5.6	3.5	3.9	4.8	5.5	4.9	6.3	+1.4
Use inhalants																								
% saying any friends	18	17.8	16.5	18.4	16.1	19.3	21.2	22.4	24.7	20.8	22.1	20.0	19.2	22.2	23.7	26.5	27.5	27.2	27.4	25.9	21.6	23.5	22.2	-1.3
	19-22	11.9	13.2	13.8	12.3	11.7	9.6	10.9	12.7	10.9	11.7	13.0	12.2	12.6	13.8	14.0	14.2	16.2	13.7	16.2	16.3	13.7	13.7	0.0
	23-26					7.7	6.7	7.2	6.1	6.2	5.9	6.1	4.4	5.1	6.3	7.0	9.3	5.6	7.5	6.2	7.9	6.9	7.5	+0.5
	27-30									4.6	3.5	2.9	2.5	3.3	2.9	3.5	4.0	4.1	3.6	3.8	4.2	3.6	6.0	+2.4
% saying most or all	18	1.2	0.9	1.3	1.1	1.1	1.5	2.0	1.9	1.2	1.9	1.0	0.7	1.8	1.8	2.0	2.0	2.4	1.9	2.7	1.8	1.4	1.4	0.0
	19-22	0.5	0.4	0.7	0.3	0.5	0.6	0.7	0.7	0.7	0.4	0.6	0.2	0.8	0.7	0.7	0.6	1.1	0.7	1.3	0.8	0.6	1.2	+0.6
	23-26					0.6	0.2	0.6	0.1	0.2	0.4	0.4	0.1	0.0	0.1	0.2	0.7	0.5	0.8	0.0	0.1	0.7	0.1	-0.6
	27-30									0.3	0.0	0.2	0.2	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	+0.3

(Table continued on next page)

TABLE 7-2 (cont.)

Trends in Proportions of Friends Using Drugs

High School Seniors (Age 18) and Young Adults in Modal Age Groups of 19-22, 23-26, and 27-30

(Entries are percentages)

Q. How many of your friends would you estimate...	Age Group	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00-'01 change
Use nitrites																								
% saying any friends	18	19.0	17.4	17.5	14.5	15.0	15.6	18.0	18.3	13.6	13.3	10.4	8.9	9.0	10.7	10.0	10.7	11.2	11.9	12.9	10.9	11.0	11.9	+0.9
	19-22	18.4	16.0	14.2	13.8	8.9	9.9	11.7	13.2	10.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	—
	23-26					10.8	7.8	8.0	7.9	5.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	—
	27-30									6.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	—
% saying most or all	18	1.3	1.2	0.9	0.7	1.2	1.0	1.2	1.3	0.7	0.9	0.6	0.4	0.7	0.7	0.8	0.8	0.8	0.7	1.0	0.7	1.0	0.6	-0.3
	19-22	0.3	0.4	0.9	0.6	0.6	0.6	0.4	0.4	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	—
	23-26					0.8	0.3	0.4	0.3	0.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	—
	27-30									0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	—
Take LSD																								
% saying any friends	18	28.1	28.5	27.8	24.0	23.9	24.4	24.5	25.3	24.1	25.2	25.0	23.4	28.1	31.3	34.1	36.9	37.9	36.5	36.8	32.2	31.9	32.2	+0.3
	19-22	30.9	25.9	26.5	22.6	21.6	18.8	18.7	18.2	19.0	20.1	20.1	22.0	22.2	28.8	23.8	26.9	28.6	24.7	29.4	28.2	27.8	28.4	+0.5
	23-26					21.5	17.2	15.4	15.9	13.3	14.1	12.3	12.5	15.0	17.2	17.3	21.5	15.3	18.2	15.2	18.1	19.3	16.8	-2.5
	27-30									10.4	7.7	9.1	8.6	10.9	8.7	8.1	12.0	11.6	12.3	12.6	13.4	11.8	12.5	+0.7
% saying most or all	18	1.8	2.2	2.4	1.4	2.0	1.5	1.8	1.6	1.5	2.4	1.9	1.7	2.4	3.8	4.2	4.8	5.0	3.7	4.7	3.9	3.1	2.9	-0.2
	19-22	1.2	0.8	0.9	1.0	0.6	0.8	0.9	0.6	1.3	0.4	1.2	1.4	1.9	2.1	2.5	2.3	3.8	1.4	2.5	1.8	2.1	2.7	+0.6
	23-26					0.8	0.5	1.0	0.2	0.6	0.5	0.6	0.2	0.4	0.7	1.1	0.7	0.7	0.6	1.0	1.5	0.9	0.3	-0.6
	27-30									0.3	0.2	0.3	0.3	0.0	0.3	0.4	0.3	0.4	0.4	0.1	0.6	0.4	0.4	0.0
Take other hallucinogens																								
% saying any friends	18	28.2	26.3	25.6	22.1	21.3	22.0	22.3	21.7	17.8	18.1	15.9	15.1	17.0	19.3	21.4	23.8	26.4	26.3	27.4	22.5	24.0	35.4	—[b]
	19-22	33.4	25.5	25.1	21.0	20.2	16.6	15.8	15.0	16.1	13.9	15.3	14.2	12.0	15.0	13.8	14.9	17.2	17.2	19.1	18.9	20.9	33.6	—[b]
	23-26					20.0	16.7	13.2	13.2	11.7	9.6	8.7	8.5	9.8	9.4	10.3	11.7	10.4	13.0	11.7	9.6	11.3	18.6	—[b]
	27-30									10.6	7.4	7.1	6.8	7.9	7.1	6.6	7.9	7.5	6.8	7.8	9.4	8.0	14.6	—[b]
% saying most or all	18	2.2	2.1	1.9	1.6	1.9	1.4	1.3	1.2	0.9	1.4	1.0	0.8	1.0	1.7	2.2	2.2	2.3	2.6	3.1	2.4	2.4	2.9	—[b]
	19-22	1.5	0.9	1.1	1.2	0.7	1.0	0.7	0.6	0.9	0.2	0.5	0.8	0.7	0.9	1.6	1.5	1.0	1.1	1.7	0.8	2.0	2.3	—[b]
	23-26					0.8	0.3	0.5	0.3	0.2	0.3	0.8	0.1	0.4	0.7	0.6	0.8	0.1	0.8	0.7	0.8	0.3	0.6	—[b]
	27-30									0.2	0.1	0.3	0.2	0.0	0.2	0.3	0.1	0.2	0.3	0.2	0.2	0.4	0.6	—[b]
Use PCP																								
% saying any friends	18	22.2	17.2	17.3	14.2	14.2	15.9	16.1	15.5	13.5	14.7	13.0	12.0	12.7	15.6	15.5	18.3	20.3	19.7	20.2	16.8	17.5	19.1	+1.6
	19-22	24.1	15.3	15.3	12.6	9.5	8.9	10.1	9.7	10.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	—
	23-26					11.6	6.8	7.4	6.9	5.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	—
	27-30									6.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	—
% saying most or all	18	1.6	0.9	0.9	1.1	1.1	1.2	1.2	1.1	0.8	1.2	0.5	0.5	0.9	1.9	1.2	1.2	1.3	1.4	1.6	1.5	1.7	1.3	-0.4
	19-22	0.5	0.3	0.3	0.5	0.7	0.7	0.2	0.1	0.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	—
	23-26					0.6	0.0	0.4	0.0	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	—
	27-30									0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	—

(Table continued on next page)

TABLE 7-2 (cont.)

Trends in Proportions of Friends Using Drugs

High School Seniors (Age 18) and Young Adults in Modal Age Groups of 19-22, 23-26, and 27-30

(Entries are percentages)

Q. How many of your friends would you estimate...	Age Group	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00-'01 change
Take MDMA (ecstasy)																								
% saying any friends	18											12.4	11.9	10.7	12.8	15.9	20.7	24.2	27.7	24.5	26.7	37.3	41.9	+4.5 s
	19-22										16.3	14.3	12.0	12.9	13.7	11.3	17.2	20.7	21.4	26.0	30.7	42.4	43.3	+0.9
	23-26										7.6	9.0	9.5	11.0	9.8	11.4	11.2	11.3	15.1	13.7	15.2	25.9	29.4	+3.5
	27-30										5.6	6.3	5.4	4.6	6.6	5.8	6.9	10.1	7.4	8.5	12.4	13.1	17.8	+4.7
% saying most or all	18											2.2	1.7	2.1	1.2	1.7	2.8	3.0	2.6	2.5	2.7	4.8	5.2	+0.4
	19-22										0.4	0.7	0.2	0.7	0.7	0.5	0.5	0.8	1.7	2.0	2.9	4.9	5.8	+0.9
	23-26										0.5	0.2	0.1	0.1	0.5	0.1	0.4	0.1	0.8	0.8	0.4	2.9	1.7	-1.2
	27-30										0.5	0.3	0.0	0.1	0.3	0.2	0.5	0.1	0.3	0.0	0.8	0.4	0.3	-0.1
Take cocaine																								
% saying any friends	18	41.6	40.1	40.7	37.6	38.9	43.8	45.6	43.7	37.7	37.4	31.7	26.8	26.3	24.5	26.1	24.8	28.1	28.2	31.2	27.8	27.2	27.1	-0.1
	19-22	51.0	48.9	49.8	46.5	47.6	45.9	48.3	45.7	42.0	42.7	33.2	29.7	22.8	24.3	21.5	22.0	19.4	22.2	26.8	25.7	24.8	27.4	+2.6
	23-26					52.4	53.2	51.6	50.7	47.1	40.8	34.8	29.0	28.8	27.1	22.3	24.4	18.1	19.7	18.7	20.1	20.3	19.4	-0.9
	27-30									47.9	43.3	38.3	35.7	29.9	27.6	22.6	26.2	20.8	21.5	18.6	20.7	16.5	19.7	+3.2
% saying most or all	18	6.1	6.3	4.9	5.1	5.1	5.8	6.2	5.1	3.4	3.7	2.1	1.5	1.5	2.1	1.5	2.0	2.2	2.0	3.2	2.9	2.0	1.7	-0.2
	19-22	7.0	8.6	7.8	6.1	6.3	6.1	6.1	3.3	3.5	2.1	1.2	1.1	1.0	0.5	1.5	0.9	1.0	0.8	1.5	1.1	1.0	1.8	+0.8
	23-26					9.1	5.3	7.0	4.1	3.1	2.7	2.1	0.6	0.9	0.8	1.0	0.3	0.4	1.1	0.9	0.5	0.8	1.6	+0.9
	27-30									3.8	2.0	2.3	0.9	1.2	0.8	0.8	0.4	0.4	0.6	0.1	0.4	0.4	0.5	+0.1
Take crack																								
% saying any friends	18								27.4	25.4	26.1	19.2	17.6	17.8	17.9	20.0	19.2	21.6	22.2	24.4	19.0	21.4	23.4	+2.0
	19-22								23.8	21.8	20.6	14.6	14.3	11.8	13.6	13.8	14.0	9.4	13.1	16.4	15.7	16.5	17.4	+1.0
	23-26								26.4	22.4	19.8	14.4	10.8	10.8	8.8	8.8	11.1	8.2	8.3	8.3	8.8	7.9	8.6	+0.6
	27-30									22.1	18.4	16.6	11.6	10.3	10.2	10.4	10.3	8.6	6.3	6.4	8.7	6.0	7.1	+1.1
% saying most or all	18								2.2	1.1	2.1	0.6	0.6	0.7	0.9	1.0	1.1	0.9	1.1	1.7	1.5	1.4	0.8	-0.5
	19-22								0.7	0.8	1.0	0.6	0.2	0.1	0.3	0.4	0.3	0.5	0.3	0.9	0.9	0.5	0.3	-0.2
	23-26								0.8	0.9	0.8	0.5	0.1	0.1	0.5	0.2	0.0	0.3	0.5	0.4	0.0	0.5	0.3	-0.2
	27-30									1.2	0.9	0.9	0.3	0.0	0.6	0.3	0.1	0.2	0.2	0.1	0.0	0.0	0.0	0.0
Take heroin																								
% saying any friends	18	13.0	12.5	13.2	12.0	13.0	14.5	15.3	13.9	12.4	14.0	11.4	11.4	13.2	13.3	14.3	14.5	15.6	15.6	16.5	12.7	14.9	13.1	-1.8
	19-22	11.0	8.1	9.4	7.5	7.1	6.5	8.5	8.5	7.8	6.8	6.5	6.1	4.7	7.0	8.1	10.4	6.7	7.4	9.4	9.7	7.7	8.7	+1.0
	23-26					6.1	4.4	4.3	6.5	3.6	5.2	4.2	3.6	3.8	4.5	4.9	5.8	4.0	6.2	5.8	4.8	4.7	5.0	+0.3
	27-30									3.8	2.8	4.5	2.7	3.1	3.6	4.2	3.6	4.4	4.2	3.5	3.8	2.8	4.3	+1.5
% saying most or all	18	1.0	0.5	0.7	0.8	0.8	0.9	1.1	0.9	0.7	1.1	0.4	0.4	0.7	1.1	1.0	1.1	0.9	0.8	1.3	1.0	1.1	0.9	-0.3
	19-22	0.3	0.5	0.1	0.2	0.4	0.6	0.2	0.3	0.2	0.2	0.3	0.2	0.1	0.2	0.4	0.4	0.4	0.2	0.5	0.1	0.3	0.6	+0.3
	23-26					0.4	0.2	0.2	0.0	0.2	0.4	0.2	0.3	0.4	0.1	0.2	0.2	0.0	0.7	0.0	0.0	0.3	0.0	-0.3
	27-30									0.2	0.1	0.2	0.2	0.0	0.2	0.3	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0

(Table continued on next page)

TABLE 7-2 (cont.)

Trends in Proportions of Friends Using Drugs

High School Seniors (Age 18) and Young Adults in Modal Age Groups of 19-22, 23-26, and 27-30

(Entries are percentages)

Q. How many of your friends would you estimate...	Age Group	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00-'01 change
Take other narcotics																								
% saying any friends	18	22.4	23.1	23.9	20.8	21.4	22.8	21.8	23.2	19.2	19.2	17.2	13.7	14.9	16.1	18.5	19.5	21.8	22.2	24.8	22.9	23.1	24.0	+0.9
	19-22	22.8	20.4	21.9	17.9	17.4	16.9	14.6	15.4	14.1	15.0	12.9	14.1	10.8	13.2	10.5	15.9	13.4	13.2	15.2	19.8	23.2	23.0	-0.2
	23-26					16.0	14.9	14.0	13.0	10.6	10.8	10.5	8.5	8.4	8.7	8.0	10.5	8.9	9.9	9.4	10.4	11.2	13.5	+2.4
	27-30									12.1	8.6	9.1	9.3	7.5	8.2	8.0	7.7	9.5	7.9	8.3	7.2	8.4	11.2	+2.8
% saying most or all	18	1.7	1.5	1.4	1.4	1.6	1.4	1.8	1.4	1.2	1.4	0.9	0.5	1.1	1.2	1.0	1.6	1.5	1.4	2.9	1.8	2.0	2.0	+0.1
	19-22	0.9	0.7	0.6	0.5	0.8	1.0	0.5	0.4	0.9	0.1	0.6	0.4	0.5	0.6	0.6	0.6	0.4	0.4	0.8	0.4	1.2	1.8	+0.6
	23-26					0.4	0.3	0.7	0.0	0.3	0.2	0.2	0.0	0.0	0.0	0.3	0.2	0.0	0.6	0.3	0.0	0.4	0.5	+0.1
	27-30									0.3	0.0	0.2	0.2	0.1	0.2	0.2	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.0
Take amphetamines																								
% saying any friends	18	43.9	48.8	50.6	46.1	45.1	43.3	41.8	39.5	33.4	33.5	28.7	24.3	24.3	27.5	28.1	30.3	32.2	32.7	33.8	30.8	32.9	33.2	+0.3
	19-22	54.1	52.2	51.3	49.7	46.1	42.1	38.5	34.5	26.8	29.6	23.3	26.2	19.5	21.0	20.9	21.7	21.6	21.1	24.4	25.5	28.4	28.0	-0.4
	23-26					45.6	40.1	33.5	32.1	28.4	23.1	20.6	17.1	15.1	16.8	16.2	18.2	12.5	14.4	14.1	14.2	14.5	17.5	+3.0
	27-30									26.1	21.6	19.3	17.0	15.3	14.0	13.1	13.7	15.5	12.9	11.0	11.8	11.9	12.9	+1.1
% saying most or all	18	4.8	6.4	5.4	5.1	4.5	3.4	3.4	2.6	1.9	2.6	1.9	1.3	1.3	2.0	1.8	2.0	2.8	2.4	3.4	2.8	3.1	2.2	-0.8
	19-22	3.8	5.7	4.6	3.8	3.3	2.9	1.3	1.9	1.4	0.7	1.0	0.6	0.9	0.2	1.1	1.2	0.7	0.7	1.2	0.7	1.7	1.6	-0.1
	23-26					1.9	1.8	1.7	1.2	0.3	0.6	0.7	0.8	0.4	1.5	0.9	0.5	0.2	0.8	0.5	0.6	0.3	0.5	+0.3
	27-30									0.6	0.4	0.5	0.5	0.1	0.5	0.5	0.3	0.3	0.1	0.3	0.6	0.1	0.5	+0.4
Take barbiturates																								
% saying any friends	18	30.5	31.1	31.3	28.3	26.6	27.1	25.6	24.3	19.7	20.3	17.4	14.8	16.4	17.8	18.2	17.8	21.6	20.4	22.8	20.9	21.6	22.1	+0.5
	19-22	33.2	27.9	27.7	23.6	22.0	17.2	18.8	15.5	14.0	14.1	11.9	12.8	10.7	11.7	9.7	13.3	11.6	12.1	14.8	16.0	15.2	18.6	+3.4
	23-26					22.2	18.7	16.3	14.1	11.2	10.4	8.9	8.3	8.7	8.2	7.6	9.6	6.9	8.4	7.9	8.3	6.6	11.1	+4.5 s
	27-30									12.0	8.5	8.8	7.1	6.6	6.7	7.4	7.2	6.7	6.5	6.1	5.7	6.4	7.9	+1.5
% saying most or all	18	2.6	2.1	1.8	1.7	1.7	1.6	1.4	1.1	1.1	1.4	0.6	0.5	0.6	1.0	1.1	1.4	1.6	1.1	2.5	1.4	1.7	1.1	-0.6
	19-22	1.1	1.3	1.0	0.8	0.8	0.5	0.3	0.4	0.8	0.1	0.2	0.3	0.1	0.1	0.3	0.8	0.2	0.7	0.4	0.4	1.0	0.9	0.0
	23-26					0.4	0.3	0.3	0.3	0.1	0.2	0.2	0.1	0.1	0.3	0.2	0.0	0.0	0.8	0.0	0.0	0.4	0.4	0.0
	27-30									0.2	0.0	0.4	0.2	0.2	0.2	0.0	0.0	0.3	0.0	0.0	0.2	0.0	0.3	+0.3
Take quaaludes																								
% saying any friends	18	32.5	35.0	35.5	29.7	26.1	26.0	23.5	22.0	17.1	16.6	14.3	12.0	13.1	14.2	14.2	15.5	18.1	16.1	17.4	15.5	16.2	17.8	+1.6
	19-22	38.3	36.2	35.4	30.5	24.6	19.9	20.3	16.9	12.5	10.9	10.0	10.6	9.2	10.0	7.8	11.5	10.1	9.3	10.6	11.4	13.1	14.6	+1.5
	23-26					25.7	21.0	17.4	15.0	12.1	10.3	8.6	5.9	6.4	7.6	7.7	9.0	6.3	6.5	6.6	6.4	4.9	7.7	+2.7
	27-30									11.8	7.9	8.2	7.0	7.1	6.5	6.6	4.5	6.9	4.9	4.1	5.1	5.0	4.9	-0.1
% saying most or all	18	3.6	3.6	2.6	2.6	1.7	1.3	1.6	1.0	1.0	1.3	0.8	0.5	0.8	1.1	1.1	1.3	1.7	1.1	2.0	1.4	1.4	1.2	-0.2
	19-22	1.9	2.7	1.2	1.3	1.2	0.6	0.2	0.4	0.4	0.2	0.6	0.2	0.1	0.1	0.2	0.7	0.1	0.6	0.5	0.4	0.9	0.8	-0.1
	23-26					0.6	0.3	0.7	0.2	0.2	0.4	0.2	0.1	0.2	0.6	0.2	0.2	0.0	0.8	0.0	0.2	0.3	0.3	0.0
	27-30									0.5	0.2	0.2	0.2	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.2	0.3	0.0	-0.3

(Table continued on next page)

TABLE 7-2 (cont.)

Trends in Proportions of Friends Using Drugs

High School Seniors (Age 18) and Young Adults in Modal Age Groups of 19-22, 23-26, and 27-30

(Entries are percentages)

Q. How many of your friends would you estimate...	Age Group	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00-'01 change
Take tranquilizers																								
% saying any friends	18	29.7	29.5	29.9	26.7	26.6	25.8	24.2	23.3	19.9	18.0	14.9	13.5	14.6	15.5	16.5	15.8	18.1	17.9	19.7	16.4	19.4	18.6	-0.8
	19-22	37.5	33.9	28.7	22.9	22.0	19.7	20.6	18.0	16.4	14.8	13.4	13.0	11.3	11.9	9.5	13.6	10.5	11.7	13.7	16.2	16.7	21.3	+4.5
	23-26					29.3	26.3	22.3	20.8	15.5	13.1	14.8	12.1	12.5	11.0	13.4	10.4	10.7	9.6	8.5	9.8	11.2	12.4	+1.3
	27-30									20.1	16.6	16.9	14.9	12.0	12.5	13.9	11.9	11.0	10.8	12.6	10.4	10.6	9.6	-1.0
% saying most or all	18	1.9	1.4	1.1	1.2	1.5	1.2	1.3	1.0	0.7	1.5	0.5	0.4	0.7	0.9	0.9	1.1	1.4	0.8	2.3	1.3	2.1	1.3	-0.8
	19-22	0.7	0.9	0.5	0.8	0.3	0.7	0.3	0.6	0.4	0.1	0.4	0.5	0.1	0.1	0.2	0.7	0.7	0.8	0.6	0.3	0.6	0.9	+0.3
	23-26					0.4	0.3	0.5	0.0	0.3	0.4	0.2	0.3	0.1	0.4	0.2	0.0	0.0	1.1	0.1	0.0	0.5	0.8	+0.3
	27-30									0.5	0.3	0.4	0.2	0.1	0.2	0.4	0.0	0.2	0.0	0.0	0.4	0.0	0.4	+0.4
Drink alcoholic beverages																								
% saying any friends	18	96.1	94.7	95.7	95.5	94.6	94.6	95.6	95.4	95.7	95.1	92.0	91.2	90.5	88.9	90.1	90.9	89.6	90.7	91.2	90.2	89.8	89.2	-0.7
	19-22	96.3	96.7	96.6	97.3	96.8	95.8	96.9	95.6	97.0	97.6	96.1	95.2	93.1	95.1	92.5	94.8	93.7	94.5	94.5	92.8	95.2	93.4	-1.7
	23-26					96.8	96.8	96.2	95.9	95.3	95.4	94.7	93.9	95.1	94.4	94.0	94.1	92.7	95.4	95.5	93.3	94.5	93.1	-1.4
	27-30									96.1	96.0	95.2	94.4	95.6	93.4	93.3	93.3	93.1	95.1	93.1	94.4	92.7	91.4	-1.3
% saying most or all	18	68.9	67.7	69.7	69.0	66.6	66.0	68.0	71.8	68.1	67.1	60.5	58.6	56.9	57.0	59.6	56.4	56.4	60.9	61.0	58.2	57.2	59.2	+2.0
	19-22	76.6	77.6	75.2	75.1	74.9	71.9	74.2	71.3	73.4	74.1	70.0	71.4	67.4	66.5	68.7	63.9	67.0	63.8	69.4	67.8	70.1	65.4	-4.7
	23-26					73.2	74.4	69.5	74.9	68.9	69.8	67.1	69.3	68.8	68.7	70.7	67.0	68.9	66.6	67.4	63.6	70.8	65.7	-5.2
	27-30									66.7	67.8	62.0	62.7	63.3	61.3	63.2	62.6	64.1	66.6	62.9	64.4	64.8	64.9	0.0
Get drunk at least once a week																								
% saying any friends	18	83.1	81.8	83.1	83.9	81.5	82.5	84.7	85.6	84.4	82.8	79.2	79.8	79.9	79.2	81.4	78.9	78.5	82.4	81.1	81.5	79.5	79.6	+0.2
	19-22	80.9	79.9	80.0	80.4	79.8	76.7	82.0	81.1	80.6	80.4	80.1	80.8	76.5	81.1	79.6	83.2	80.9	79.2	82.3	82.8	82.2	81.9	-0.4
	23-26					73.1	72.7	73.5	73.7	72.1	73.1	72.2	74.0	73.1	74.3	72.1	73.1	74.5	71.9	74.1	71.0	76.5	74.7	-1.8
	27-30									66.3	61.8	65.4	65.2	65.5	64.5	62.7	67.1	66.7	65.4	65.5	65.9	64.3	64.7	+0.4
% saying most or all	18	30.1	29.4	29.9	31.0	29.6	29.9	31.8	31.3	29.6	31.1	27.5	29.7	28.6	27.6	28.4	27.4	29.0	30.9	31.7	30.1	32.4	32.7	+0.2
	19-22	21.9	23.3	22.0	20.2	22.7	21.7	20.8	21.3	24.0	22.6	23.6	24.9	22.6	28.8	26.3	28.2	26.0	26.6	29.8	29.3	28.1	30.2	+2.2
	23-26					11.4	11.6	12.5	11.9	12.8	12.0	13.9	11.6	14.6	13.2	15.2	15.2	14.0	17.0	16.0	16.8	17.4	19.1	+1.7
	27-30									5.2	6.3	6.7	6.6	5.9	6.7	6.4	7.9	8.6	7.7	9.3	12.1	9.8	11.7	+1.9
Smoke cigarettes																								
% saying any friends	18	90.6	88.5	88.3	87.0	86.0	87.0	87.8	88.3	87.7	86.5	84.9	85.7	84.4	84.8	88.1	87.9	88.3	89.9	89.5	89.3	87.2	86.8	-0.4
	19-22	94.4	94.3	93.4	93.1	91.9	91.6	91.1	90.3	89.3	90.0	86.1	86.1	86.7	86.7	86.1	88.8	89.2	91.3	92.6	91.0	90.9	90.9	-0.1
	23-26					93.9	95.0	91.6	92.1	89.8	90.1	88.7	89.6	85.6	88.3	86.4	86.8	85.3	85.4	88.7	84.1	86.5	86.7	+0.2
	27-30									92.6	89.8	90.7	90.4	88.0	85.8	84.8	84.9	85.4	84.1	81.1	86.3	85.1	84.9	-0.2
% saying most or all	18	23.3	22.4	24.1	22.4	19.2	22.8	21.5	21.0	20.2	23.1	21.4	21.8	21.4	25.0	25.3	27.5	30.4	34.4	33.9	31.1	28.2	25.0	-3.1
	19-22	31.8	27.6	25.6	25.2	25.6	22.7	21.9	22.5	19.3	19.9	19.2	20.2	20.3	22.2	21.7	28.4	24.0	25.1	28.8	26.8	29.4	27.0	-2.4
	23-26					25.6	22.7	19.7	18.5	16.5	20.5	16.9	18.1	16.0	15.5	16.6	13.9	17.6	17.0	16.8	17.5	17.0	15.5	-1.4
	27-30									15.8	14.2	11.6	12.9	11.9	14.3	10.9	12.3	10.4	12.1	12.3	13.4	11.7	10.2	-1.4

(Table continued on next page)

TABLE 7-2 (cont.)

Trends in Proportions of Friends Using Drugs

High School Seniors (Age 18) and Young Adults in Modal Age Groups of 19-22, 23-26, and 27-30

(Entries are percentages)

Q. How many of your friends would you estimate...	Age Group	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2001	2000	'00-'01 change
Take steroids																								
% saying any friends	18											25.9	24.7	21.5	19.0	18.1	19.5	17.9	18.9	18.3	20.0	19.8	21.7	+2.0
	19-22										23.4	21.5	22.2	19.7	20.7	16.8	16.6	16.1	16.8	20.0	20.6	18.9	20.0	+1.1
	23-26										15.3	15.0	12.3	14.5	11.1	10.5	12.4	7.3	13.0	9.2	15.0	12.2	13.6	+1.5
	27-30										9.9	10.5	7.5	8.0	8.0	8.0	8.0	10.2	9.1	7.0	11.2	9.3	10.7	+1.5
% saying most or all	18											1.8	1.0	1.7	0.9	1.2	1.3	0.8	1.7	1.4	0.9	1.9	1.2	-0.7
	19-22										0.2	0.6	0.0	0.1	0.4	0.2	0.1	0.0	0.1	0.3	0.1	0.3	0.7	+0.5
	23-26										0.4	0.0	0.0	0.2	0.1	0.1	0.0	0.0	0.5	0.0	0.1	0.3	0.2	0.0
	27-30										0.5	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Approximate Weighted N=	18	*2987*	*3307*	*3303*	*3095*	*2945*	*2971*	*2798*	*2948*	*2961*	*2587*	*2361*	*2339*	*2373*	*2410*	*2337*	*2379*	*2156*	*2292*	*2313*	*2060*	*1838*	*1923*	
	19-22	*576*	*592*	*564*	*579*	*543*	*554*	*579*	*572*	*562*	*579*	*556*	*526*	*510*	*468*	*435*	*470*	*469*	*467*	*437*	*426*	*402*	*402*	
	23-26					*527*	*534*	*546*	*528*	*528*	*506*	*510*	*507*	*516*	*495*	*449*	*456*	*416*	*419*	*394*	*414*	*387*	*403*	
	27-30									*516*	*507*	*499*	*476*	*478*	*461*	*419*	*450*	*464*	*454*	*428*	*424*	*363*	*359*	

Source: The Monitoring the Future Study, the University of Michigan.

NOTES: Level of significance of difference between the two most recent years: s = .05, ss = .01, sss = .001. Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding.

'NA' indicates data not available.

[a] These estimates were derived from responses to the questions listed above. For the young adult sample, "any illicit drug" includes all of the drugs listed except cigarettes and alcohol.

[b] In 2001 the question text was changed from "other psychedelics" to "other hallucinogens" and "shrooms" was added to the list of examples. These changes likely explain the discontinuity in the 2001 results.

TABLE 7-3

Trends in Exposure to Drug Use

High School Seniors (Age 18) and Young Adults in Modal Age Groups of 19-22, 23-26, and 27-30

(Entries are percentages)

Q. During the LAST 12 MONTHS how often have you been around people who were taking each of the following to get high or for "kicks"?	Age Group	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00-'01 change
Any illicit drug[a]																								
% saying any exposure	18	84.3	82.7	81.4	79.4	77.9	77.7	75.5	73.9	71.3	68.6	67.6	64.2	61.3	66.1	70.8	75.3	78.0	78.8	77.2	77.9	76.0	76.5	+0.5
	19-22	80.6	81.0	81.5	76.5	76.3	77.4	74.6	72.7	69.5	61.5	60.8	58.9	58.6	58.4	60.7	66.4	67.2	65.3	69.1	65.8	64.7	69.7	+5.0
	23-26					68.9	70.2	68.0	62.4	62.7	58.3	54.6	52.1	48.2	49.9	47.1	54.2	50.3	55.4	50.6	50.5	55.1	56.4	+1.3
	27-30									52.4	50.2	47.0	39.6	41.7	38.9	45.6	42.4	44.9	41.6	37.5	41.1	40.8	42.2	+1.4
% saying often exposed	18	36.3	36.1	31.4	29.8	28.3	27.2	26.3	23.3	20.8	22.0	20.7	18.2	18.0	24.0	29.3	32.3	33.8	34.7	33.2	35.6	32.6	33.6	+1.0
	19-22	34.6	34.0	32.1	24.4	24.4	23.7	21.1	18.9	19.9	16.2	16.4	17.6	21.4	16.1	18.1	23.7	20.4	25.3	24.2	24.0	21.3	26.1	+4.8
	23-26					20.7	23.3	18.5	17.4	18.2	13.8	13.7	13.3	12.2	11.1	11.1	12.5	12.8	14.3	14.2	15.0	15.9	16.4	+0.6
	27-30									13.7	12.0	10.8	8.2	10.5	9.0	12.5	8.5	10.1	10.3	8.5	9.6	9.4	10.4	+1.0
Any illicit drug[a] other than marijuana																								
% saying any exposure	18	58.5	62.6	62.5	59.4	59.8	59.3	55.3	51.7	47.8	47.1	45.4	40.0	41.6	42.6	45.3	47.2	49.7	47.9	47.3	46.5	47.2	49.9	+2.7
	19-22	56.9	58.4	61.6	54.9	57.1	53.3	53.4	48.5	46.4	36.5	39.4	33.8	37.1	29.4	33.9	36.8	36.5	39.4	40.0	36.4	38.1	39.2	+1.1
	23-26					51.5	51.9	51.5	43.6	42.9	36.8	34.0	30.0	27.3	27.8	24.9	26.8	23.2	25.6	27.1	28.0	31.0	31.4	+0.5
	27-30									35.8	33.7	31.5	25.8	26.6	24.2	25.8	21.1	21.8	21.4	15.4	19.5	17.2	22.2	+5.0
% saying often exposed	18	14.1	17.1	16.6	14.2	14.6	12.9	12.1	10.2	9.6	10.7	9.2	7.9	7.5	9.6	9.4	11.1	12.1	11.7	9.9	11.7	10.5	11.9	+1.5
	19-22	11.8	15.6	13.5	11.1	10.7	10.2	8.2	8.1	7.5	6.7	4.5	4.4	5.5	4.1	5.1	7.7	3.9	7.6	7.0	4.8	6.4	7.8	+1.4
	23-26					9.0	10.4	9.3	8.5	6.7	5.0	5.1	3.5	2.6	3.0	2.2	3.5	3.4	3.1	3.1	4.3	3.5	3.4	-0.1
	27-30									6.0	4.7	4.1	3.2	3.7	2.4	3.4	2.9	3.4	3.2	1.0	2.5	1.6	3.7	+2.1
Marijuana																								
% saying any exposure	18	82.0	80.2	77.9	76.2	74.4	73.5	72.0	70.4	67.0	64.8	63.4	59.6	56.8	61.0	67.2	72.7	75.6	76.8	75.5	75.8	73.8	74.9	+1.1
	19-22	79.8	79.8	78.7	72.7	74.1	75.5	72.4	70.5	66.3	59.3	57.5	55.0	56.4	55.4	56.8	64.0	64.8	63.4	67.1	63.5	63.9	68.0	+4.1
	23-26					65.3	66.0	64.1	59.0	57.6	55.0	50.6	47.9	44.6	45.9	44.4	51.0	47.8	53.1	48.8	48.1	51.8	54.2	+2.4
	27-30									49.1	47.4	42.1	36.0	38.2	35.3	41.9	38.3	41.8	39.1	35.7	38.7	38.8	37.0	-1.8
% saying often exposed	18	33.8	33.1	28.0	26.1	24.8	24.2	24.0	20.6	17.9	19.5	17.8	16.0	15.6	20.9	27.6	30.7	31.8	32.9	31.4	34.4	30.3	30.8	+0.5
	19-22	32.6	30.5	30.3	21.1	21.9	20.3	18.6	16.4	18.3	14.2	14.7	15.9	19.9	14.7	17.0	22.1	20.3	23.7	22.8	23.0	20.4	24.5	+4.1
	23-26					17.5	20.6	14.6	14.8	15.6	11.6	11.2	11.6	10.9	10.4	10.4	11.1	11.5	12.9	13.6	13.2	15.2	15.6	+0.4
	27-30									10.9	9.8	8.5	6.7	8.9	7.6	10.7	7.4	9.1	8.9	8.1	8.8	8.6	8.4	-0.2

(Table continued on next page)

TABLE 7-3 (cont.)

Trends in Exposure to Drug Use

High School Seniors (Age 18) and Young Adults in Modal Age Groups of 19-22, 23-26, and 27-30

(Entries are percentages)

Q. During the LAST 12 MONTHS how often have you been around people who were taking each of the following to get high or for "kicks"?	Age Group	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00-'01 change
LSD																								
% saying any exposure	18	17.2	17.4	16.1	13.8	12.5	13.2	13.1	12.9	13.4	15.0	14.9	15.7	17.8	21.0	24.2	26.1	27.6	25.9	23.1	23.6	22.0	21.6	-0.4
	19-22	17.4	15.8	16.0	13.5	12.8	12.7	10.8	10.9	12.0	12.0	12.1	13.1	19.3	13.4	16.5	18.6	20.7	22.3	21.0	20.1	15.9	15.2	-0.7
	23-26					8.3	9.3	8.8	7.3	6.3	6.7	8.4	8.6	8.8	7.8	8.4	9.9	8.6	7.6	9.8	9.4	9.8	11.1	+1.3
	27-30									3.6	3.2	3.3	3.6	3.9	4.9	5.3	5.5	4.3	3.9	3.2	3.7	3.2	4.3	+1.1
% saying often exposed	18	1.4	2.0	1.9	1.4	1.5	1.3	1.6	1.8	1.6	2.2	2.6	2.9	3.0	3.9	4.2	6.1	4.7	5.1	3.2	4.1	3.3	2.8	-0.5
	19-22	1.4	1.5	1.4	0.6	0.8	0.7	0.5	1.2	0.6	1.1	1.2	1.0	2.0	1.1	0.4	3.6	1.4	1.8	2.0	1.7	1.4	2.4	+1.1
	23-26					0.3	0.4	0.4	0.7	0.6	0.3	0.5	0.2	0.8	0.3	0.5	0.5	0.4	0.2	0.1	0.3	0.2	0.0	-0.2
	27-30									0.3	0.2	0.5	0.2	0.2	0.5	0.5	0.2	0.2	0.0	0.0	0.1	0.0	0.0	0.0
Other hallucinogens																								
% saying any exposure	18	20.4	17.6	16.8	13.1	12.7	12.5	11.8	10.0	9.0	8.8	9.4	9.4	9.7	12.1	14.0	15.8	16.6	17.8	15.9	17.7	16.3	28.1	—[b]
	19-22	18.3	16.3	16.3	12.5	10.5	11.0	9.2	9.1	7.7	8.4	8.3	8.9	10.6	6.7	8.3	12.8	13.1	15.0	15.0	12.4	11.8	22.8	—[b]
	23-26					8.4	8.9	9.1	6.0	5.1	4.8	5.7	5.5	5.1	5.7	5.2	5.5	6.9	5.6	8.7	5.8	8.9	14.8	—[b]
	27-30									5.0	3.4	3.4	3.4	2.1	3.7	3.4	4.2	3.2	2.9	2.6	3.0	3.0	6.4	—[b]
% saying often exposed	18	2.2	2.0	2.6	1.1	1.7	1.4	1.5	1.2	1.1	1.3	1.2	1.3	1.1	1.9	2.3	2.5	2.7	2.8	1.7	2.7	2.1	3.6	—[b]
	19-22	1.1	0.9	0.9	0.7	0.8	0.8	0.2	0.8	0.3	0.4	0.4	0.5	0.7	0.4	0.2	1.6	0.7	0.7	0.5	0.6	0.8	2.6	—[b]
	23-26					0.1	0.3	0.5	0.6	0.8	0.1	0.4	0.4	0.0	0.2	0.4	0.3	0.3	0.2	0.0	0.0	0.4	0.2	—[b]
	27-30									0.2	0.4	0.5	0.3	0.1	0.5	0.2	0.3	0.2	0.5	0.0	0.1	0.0	0.4	—[b]
Cocaine																								
% saying any exposure	18	37.7	36.3	34.9	33.3	35.6	38.3	37.4	34.9	30.2	30.2	27.7	21.3	19.8	19.2	18.8	21.6	25.0	25.6	26.6	25.8	24.2	24.5	+0.3
	19-22	37.6	42.3	43.6	36.6	38.9	39.4	41.5	37.0	36.2	26.6	24.0	18.5	19.8	13.5	14.7	14.1	19.3	18.8	21.6	18.5	19.1	20.6	+1.5
	23-26					38.5	40.6	42.0	34.5	35.9	28.0	24.0	19.9	16.7	14.6	14.3	14.1	12.5	14.0	16.0	18.2	16.4	16.9	+0.4
	27-30									28.9	28.3	24.2	18.6	19.4	16.6	14.3	11.4	12.1	11.4	8.6	11.6	10.2	11.6	+1.4
% saying often exposed	18	5.9	6.6	6.6	5.2	6.7	7.1	7.8	5.9	5.1	5.4	4.7	3.4	2.7	2.9	2.5	3.2	4.0	4.2	3.7	4.6	4.6	4.5	-0.1
	19-22	5.8	7.6	6.5	4.3	6.5	7.0	5.4	5.2	4.8	4.3	2.2	1.6	1.7	1.7	1.8	1.7	1.2	2.4	3.2	1.4	3.8	3.0	-0.8
	23-26					5.3	8.5	7.0	6.0	5.4	3.5	2.5	1.7	1.4	1.7	1.0	1.7	1.3	1.8	1.5	2.2	1.8	1.0	-0.8
	27-30									4.4	3.9	2.9	2.2	2.0	1.2	1.5	1.4	1.9	1.6	0.8	1.5	0.3	1.6	+1.3

(Table continued on next page)

TABLE 7-3 (cont.)

Trends in Exposure to Drug Use

High School Seniors (Age 18) and Young Adults in Modal Age Groups of 19-22, 23-26, and 27-30

(Entries are percentages)

Q. During the LAST 12 MONTHS how often have you been around people who were taking each of the following to get high or for "kicks"?	Age Group	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00-'01 change
Heroin																								
% saying any exposure	18	7.4	6.6	7.1	5.1	6.0	5.5	6.0	5.8	5.7	6.5	5.4	5.1	5.4	5.7	7.3	7.9	8.6	9.1	8.7	8.1	9.1	8.7	-0.5
	19-22	4.4	3.3	4.1	2.9	3.1	4.8	2.9	2.9	2.9	2.9	2.5	3.0	2.7	2.0	3.7	3.8	3.6	3.7	6.4	3.2	5.2	3.2	-2.0
	23-26					2.3	3.3	3.2	2.9	1.7	2.3	2.3	1.8	1.7	1.5	1.9	2.8	2.9	2.7	3.1	2.9	2.6	2.4	-0.1
	27-30									2.1	1.4	1.5	0.9	1.0	2.0	2.0	1.7	1.5	1.3	1.4	1.9	1.9	2.3	+0.4
% saying often exposed	18	0.4	0.6	1.0	0.7	1.1	0.5	1.0	0.9	0.8	1.0	0.5	0.9	0.7	1.1	0.7	1.2	1.6	1.2	0.9	1.3	1.5	0.7	-0.8 s
	19-22	0.2	0.3	0.3	0.1	0.2	0.5	0.2	0.1	0.2	0.1	0.2	0.4	0.6	0.4	0.6	1.2	0.2	0.4	0.7	0.8	0.7	0.8	0.0
	23-26					0.0	0.7	0.3	0.6	0.4	0.3	0.6	0.3	0.0	0.0	0.0	0.2	0.2	0.3	0.5	1.0	0.0	0.0	0.0
	27-30									0.3	0.3	0.5	0.2	0.2	0.9	0.3	0.6	0.6	0.0	0.0	0.2	0.0	0.0	0.0
Other narcotics																								
% saying any exposure	18	19.6	17.5	18.5	17.3	18.0	18.4	15.6	14.4	14.8	13.8	14.2	11.3	11.1	12.4	14.9	15.5	18.5	20.4	20.7	21.9	21.1	21.6	+0.5
	19-22	14.4	14.4	15.2	10.9	12.4	13.7	9.8	12.2	11.2	9.0	9.4	9.2	8.5	6.8	10.1	12.1	11.5	14.5	15.3	13.9	17.0	18.3	+1.3
	23-26					9.0	12.3	9.2	9.7	7.4	8.0	5.9	8.3	7.0	4.6	6.9	7.8	7.4	6.5	8.1	9.4	10.9	12.2	+1.3
	27-30									6.5	6.5	5.8	5.5	3.7	5.6	5.9	5.7	4.7	4.9	3.6	5.2	6.5	9.0	+2.5
% saying often exposed	18	1.7	1.7	2.4	2.2	2.0	1.8	2.1	1.7	1.7	1.7	1.6	1.4	1.3	1.7	1.7	2.1	3.4	2.5	2.8	3.9	2.9	3.0	+0.1
	19-22	0.7	0.5	0.5	0.9	0.7	1.0	0.5	0.4	0.9	0.3	0.2	1.0	0.9	0.6	0.8	1.4	0.7	1.5	1.7	1.1	2.4	1.6	-0.8
	23-26					0.4	0.5	1.3	0.8	0.8	0.5	1.6	0.7	0.1	0.3	0.1	0.1	0.3	0.7	0.5	1.1	0.7	1.0	+0.3
	27-30									0.7	0.5	1.0	0.3	0.8	1.2	0.8	0.8	0.7	0.5	0.0	0.2	1.1	1.0	0.0
Amphetamines																								
% saying any exposure	18	40.8	49.5	50.2	46.1	45.0	41.0	36.5	31.7	27.9	27.4	28.3	23.6	24.5	24.7	28.2	28.1	31.5	31.0	29.9	30.1	29.5	31.5	+2.0
	19-22	42.3	48.6	48.4	39.7	41.3	35.9	31.3	26.7	21.2	18.5	19.5	17.4	21.3	15.1	20.3	21.0	22.3	24.6	24.8	21.2	24.8	23.3	-1.5
	23-26					32.3	30.5	29.1	20.9	18.8	14.0	16.8	14.6	11.8	13.2	11.2	13.0	11.1	11.7	14.6	12.3	18.5	18.2	-0.3
	27-30									15.6	14.3	13.5	10.7	11.4	11.3	11.0	10.6	7.6	9.1	6.6	10.4	7.4	11.1	+3.8
% saying often exposed	18	8.3	12.1	12.3	10.1	9.0	6.5	5.8	4.5	4.1	4.7	4.1	3.1	3.0	3.9	4.1	4.5	5.6	5.2	4.7	6.3	4.4	6.0	+1.6
	19-22	7.4	9.9	7.7	6.9	5.4	4.4	3.1	3.3	2.2	1.5	1.1	1.9	2.6	1.5	3.3	5.0	1.3	4.1	2.9	2.2	2.4	2.6	+0.2
	23-26					3.9	3.2	2.2	3.3	1.9	0.7	2.0	1.3	0.2	0.8	0.9	1.6	1.3	1.4	2.2	1.7	1.4	2.2	+0.9
	27-30									2.0	2.0	1.2	0.8	0.8	1.3	0.7	1.6	1.8	1.0	0.2	1.1	0.4	0.6	+0.3

(Table continued on next page)

TABLE 7-3 (cont.)

Trends in Exposure to Drug Use

High School Seniors (Age 18) and Young Adults in Modal Age Groups of 19-22, 23-26, and 27-30

(Entries are percentages)

Q. During the LAST 12 MONTHS how often have you been around people who were taking each of the following to get high or for "kicks"?	Age Group	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00-'01 change
Barbiturates																								
% saying any exposure	18	25.2	25.9	25.7	22.5	21.2	18.9	15.8	13.1	12.4	11.8	13.3	10.0	10.2	11.9	13.0	14.5	15.5	16.1	16.1	17.1	16.3	17.1	+0.7
	19-22	25.6	23.1	21.8	18.3	15.7	14.7	12.8	12.0	8.2	8.3	6.5	7.9	7.3	7.2	7.4	10.1	8.8	11.7	13.4	11.6	13.1	13.1	0.0
	23-26					16.1	13.1	11.0	7.1	7.1	6.6	6.9	5.9	6.5	3.8	4.2	5.7	6.6	4.9	8.5	7.1	9.3	9.0	-0.2
	27-30									8.0	6.8	5.9	5.4	5.2	5.7	4.5	5.2	3.5	3.8	2.7	4.1	2.9	5.3	+2.4
% saying often exposed	18	3.4	4.0	4.3	3.0	2.7	1.7	2.1	1.5	1.4	1.7	1.7	1.2	1.1	1.6	1.7	2.0	2.9	2.5	2.7	3.8	2.7	2.7	0.0
	19-22	2.5	2.8	1.1	1.4	0.7	1.3	0.5	0.7	0.7	0.3	0.7	0.4	0.7	0.7	1.3	1.3	0.4	0.9	1.4	0.9	1.6	1.2	-0.4
	23-26					0.7	0.9	1.7	0.8	0.6	0.3	1.1	0.3	0.3	0.0	0.0	0.2	0.3	0.8	0.5	0.9	0.7	0.2	-0.5
	27-30									0.7	0.4	0.6	0.2	0.4	1.2	0.2	0.6	0.5	0.2	0.0	0.6	0.2	0.9	+0.6
Tranquilizers																								
% saying any exposure	18	29.1	29.0	26.6	23.5	23.1	23.4	19.6	18.4	18.2	15.1	16.3	14.2	12.7	13.8	16.5	15.7	17.9	18.9	17.3	18.2	17.7	23.8	—[b]
	19-22	29.6	26.9	28.5	19.5	21.2	19.5	16.4	18.5	13.8	12.0	12.7	12.6	11.0	10.0	12.0	11.8	10.7	15.6	16.9	14.3	18.5	21.3	—[b]
	23-26					23.1	21.0	16.9	15.9	13.4	12.9	12.0	10.4	9.7	10.9	9.8	10.3	10.1	9.4	10.9	10.8	12.3	16.4	—[b]
	27-30									15.0	11.6	11.1	9.7	10.3	10.4	9.0	11.2	9.6	9.6	6.1	8.8	7.6	12.6	—[b]
% saying often exposed	18	3.2	4.2	3.5	2.9	2.9	2.2	2.5	2.6	2.2	2.1	1.9	1.4	1.9	1.7	1.8	2.3	3.5	3.2	2.8	3.7	3.5	4.9	—[b]
	19-22	3.2	2.6	1.8	2.1	1.5	1.7	0.9	1.1	1.8	1.0	1.1	1.1	1.5	1.1	1.3	1.5	0.5	1.3	1.6	1.5	1.7	3.1	—[b]
	23-26					2.0	1.6	2.6	1.8	1.2	0.8	0.5	1.0	0.6	0.7	0.1	1.1	1.5	0.7	1.1	1.5	1.7	1.3	—[b]
	27-30									1.4	0.3	1.7	0.8	1.3	1.3	1.0	1.1	0.8	1.2	0.2	0.9	0.4	1.6	—[b]
Alcoholic beverages																								
% saying any exposure	18	94.7	94.0	94.0	94.0	94.0	94.0	94.1	93.9	93.1	92.3	93.6	91.7	90.6	91.8	90.0	91.2	91.5	91.4	92.2	91.8	90.7	90.8	+0.1
	19-22	94.3	93.8	94.5	93.4	94.2	92.7	93.6	94.4	92.5	91.8	92.4	94.0	93.3	92.9	93.7	93.1	93.7	93.1	91.8	91.0	93.3	94.3	+1.0
	23-26					90.3	92.7	91.4	90.6	91.1	92.9	91.3	91.0	91.4	90.3	89.5	91.9	89.6	93.1	89.1	91.5	92.1	90.1	-2.0
	27-30									87.1	88.4	86.2	87.7	87.3	86.6	86.2	89.3	89.2	86.4	88.4	88.7	89.8	91.2	+1.5
% saying often exposed	18	60.2	61.0	59.3	60.2	58.7	59.5	58.0	58.7	56.4	55.5	56.1	54.5	53.1	51.9	54.0	54.0	54.5	53.9	54.5	53.5	50.2	52.7	+2.5
	19-22	59.6	61.2	62.5	56.6	59.3	61.8	59.9	61.4	55.4	53.8	56.0	53.9	56.1	56.8	57.0	56.3	52.3	54.2	57.9	54.7	54.3	53.4	-1.0
	23-26					52.1	54.8	51.4	53.0	48.1	50.9	49.7	48.4	45.4	45.4	43.3	47.5	44.8	49.8	44.6	45.7	49.6	48.8	-0.8
	27-30									39.9	39.5	38.7	38.0	39.9	38.1	39.3	38.0	34.7	37.1	36.6	38.3	34.4	40.0	+5.6
Approximate Weighted N=	18	*3259*	*3608*	*3645*	*3334*	*3238*	*3252*	*3078*	*3296*	*3300*	*2795*	*2556*	*2525*	*2630*	*2730*	*2581*	*2608*	*2407*	*2595*	*2541*	*2312*	*2153*	*2147*	
	19-22	*582*	*574*	*601*	*569*	*578*	*549*	*591*	*582*	*556*	*567*	*567*	*532*	*528*	*489*	*460*	*464*	*485*	*471*	*445*	*450*	*415*	*412*	
	23-26					*533*	*532*	*557*	*529*	*531*	*514*	*523*	*494*	*532*	*513*	*471*	*467*	*447*	*424*	*400*	*398*	*389*	*406*	
	27-30									*522*	*507*	*506*	*478*	*502*	*457*	*425*	*452*	*432*	*455*	*449*	*430*	*395*	*369*	

Source: The Monitoring the Future Study, the University of Michigan.

NOTES: Level of significance of difference between the two most recent years: s = .05, ss = .01, sss = .001. Any apparent inconsistency between the change and prevalence estimates for the two most recent years is due to rounding.

[a] These estimates were derived from responses to the questions listed above. For the young adult sample, "any illicit drug" includes all of the drugs listed except cigarettes and alcohol.

[b] In 2001 the question text was changed from "other psychedelics" to "other hallucinogens" and "shrooms" was added to the list of examples. For tranquilizers, Xanax was added to the list of examples. These changes likely explain the discontinuity in the 2001 results.

TABLE 7-4

Trends in Reported Availability of Drugs

High School Seniors (Age 18) and Young Adults in Modal Age Groups of 19-22, 23-26, and 27-30

(Entries are percentages)

Q. How difficult do you think it would be for you to get each of the following types of drugs, if you wanted some?		Percentage saying "fairly easy" or "very easy" to get[a]																						
	Age Group	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00-'01 change
Marijuana	18	89.0	89.2	88.5	86.2	84.6	85.5	85.2	84.8	85.0	84.3	84.4	83.3	82.7	83.0	85.5	88.5	88.7	89.6	90.4	88.9	88.5	88.5	0.0
	19-22	95.6	91.1	92.4	89.7	88.3	89.5	87.2	85.9	87.1	87.1	86.2	86.0	87.8	85.6	87.2	87.9	89.3	90.6	89.9	87.4	89.6	91.7	+2.1
	23-26					92.5	88.8	88.8	90.3	86.9	88.7	83.3	82.5	83.8	84.6	87.1	86.2	85.3	84.4	87.5	85.9	88.4	87.0	-1.4
	27-30									89.3	86.0	83.1	83.8	80.7	82.8	80.3	83.3	82.6	84.5	82.1	83.0	81.5	84.8	+3.4
Amyl & Butyl Nitrites	18	NA	NA	NA	NA	NA	NA	NA	23.9	25.9	26.8	24.4	22.7	25.9	25.9	26.7	26.0	23.9	23.8	25.1	21.4	23.3	22.5	-0.9
	19-22	NA	NA	NA	NA	NA	NA	NA	22.8	26.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	—
	23-26					NA	NA	NA	23.1	28.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	—
	27-30									26.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	—
LSD	18	35.3	35.0	34.2	30.9	30.6	30.5	28.5	31.4	33.3	38.3	40.7	39.5	44.5	49.2	50.8	53.8	51.3	50.7	48.8	44.7	46.9	44.7	-2.2
	19-22	39.6	38.4	35.1	31.8	32.7	29.6	30.5	29.9	33.9	36.4	36.6	37.8	42.5	44.9	43.7	50.5	50.8	47.7	51.1	43.8	47.1	42.5	-4.7
	23-26					32.7	29.1	30.0	27.5	32.7	32.6	30.2	32.8	33.5	33.4	40.1	41.0	43.6	39.2	40.4	41.2	40.4	38.3	-2.1
	27-30									29.4	29.9	32.3	27.0	30.9	30.5	27.2	35.6	33.6	35.2	32.9	35.7	35.6	38.3	+2.7
Some hallucinogen other than LSD	18	35.0	32.7	30.6	26.6	26.6	26.1	24.9	25.0	26.2	28.2	28.3	28.0	29.9	33.5	33.8	35.8	33.9	33.9	35.1	29.5	34.5	48.5	—[b]
	19-22	42.1	37.7	33.5	31.0	28.9	28.7	26.3	27.5	28.7	28.1	28.9	26.6	28.3	29.5	28.6	31.5	31.5	33.4	34.1	31.1	33.4	45.9	—[b]
	23-26					31.8	29.6	26.4	25.6	29.6	28.7	27.0	25.7	27.7	25.3	28.3	29.2	32.6	31.0	32.4	31.5	28.5	38.3	—[b]
	27-30									28.6	29.6	30.8	24.9	24.8	25.4	24.7	29.3	25.9	28.0	25.2	30.3	25.0	38.6	—[b]
PCP	18	NA	NA	NA	NA	NA	NA	NA	22.8	24.9	28.9	27.7	27.6	31.7	31.7	31.4	31.0	30.5	30.0	30.7	26.7	28.8	27.2	-1.6
	19-22	NA	NA	NA	NA	NA	NA	NA	21.7	24.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	—
	23-26					NA	NA	NA	21.2	27.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	—
	27-30									24.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	—
MDMA (Ecstasy)	18	NA	NA	NA	NA	NA	NA	NA	NA	NA	21.7	22.0	22.1	24.2	28.1	31.2	34.2	36.9	38.8	38.2	40.1	51.4	61.5	+10.1 sss
	19-22	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	26.6	24.9	27.1	23.9	27.0	29.3	33.4	35.6	39.4	43.2	49.9	55.5	+5.6
	23-26					NA	NA	NA	NA	NA	NA	21.4	23.1	26.4	24.0	26.0	27.8	28.7	31.1	30.1	34.9	41.8	51.5	+9.7 ss
	27-30									NA	NA	27.1	20.8	22.2	22.8	21.9	27.1	29.3	24.3	26.4	30.0	35.5	40.6	+5.2
Cocaine	18	47.9	47.5	47.4	43.1	45.0	48.9	51.5	54.2	55.0	58.7	54.5	51.0	52.7	48.5	46.6	47.7	48.1	48.5	51.3	47.6	47.8	46.2	-1.6
	19-22	55.7	56.2	57.1	55.2	56.2	56.9	60.4	65.0	64.9	66.8	61.7	54.3	54.5	49.2	49.9	49.4	44.4	49.7	47.7	52.6	52.1	49.6	-2.4
	23-26					63.7	67.2	65.8	69.0	71.7	70.0	65.6	58.0	61.1	53.8	54.4	54.7	50.2	46.9	51.8	45.7	45.0	44.6	-0.5
	27-30									68.6	68.2	64.0	60.0	63.1	56.8	53.1	57.0	53.0	50.4	46.9	50.0	44.6	45.5	+0.9

(Table continued on next page)

TABLE 7-4 (cont.)

Trends in Reported Availability of Drugs

High School Seniors (Age 18) and Young Adults in Modal Age Groups of 19-22, 23-26, and 27-30

(Entries are percentages)

Q. How difficult do you think it would be for you to get each of the following types of drugs, if you wanted some?	Age Group	Percentage saying "fairly easy" or "very easy" to get^a^																						'00-'01 change
		1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	
Crack	18	NA	NA	NA	NA	NA	NA	NA	41.1	42.1	47.0	42.4	39.9	43.5	43.6	40.5	41.9	40.7	40.6	43.8	41.1	42.6	40.2	-2.5
	19-22	NA	NA	NA	NA	NA	NA	NA	41.9	47.3	47.2	46.9	42.1	42.1	38.4	41.6	40.7	32.9	39.9	40.0	40.8	40.2	37.3	-2.9
	23-26					NA	NA	NA	44.5	53.0	49.9	46.9	42.0	42.6	42.5	42.4	42.3	37.9	37.2	38.4	35.0	31.9	37.1	+5.2
	27-30									46.5	46.8	46.8	43.1	45.2	45.8	41.1	44.7	39.9	36.5	33.3	38.8	35.9	36.9	+1.1
Cocaine powder	18	NA	NA	NA	NA	NA	NA	NA	52.9	50.3	53.7	49.0	46.0	48.0	45.4	43.7	43.8	44.4	43.3	45.7	43.7	44.6	40.7	-3.8
	19-22	NA	NA	NA	NA	NA	NA	NA	58.7	60.2	61.7	56.5	52.5	48.9	45.7	47.8	45.5	41.3	46.0	47.1	45.2	45.2	43.3	-1.9
	23-26					NA	NA	NA	64.9	69.1	60.1	58.6	53.2	56.4	50.5	49.7	49.6	45.9	43.6	44.4	44.3	41.8	44.4	+2.6
	27-30									63.5	62.8	57.9	55.8	56.8	55.0	48.9	52.9	48.4	45.1	43.9	46.5	43.9	42.7	-1.2
Heroin	18	21.2	19.2	20.8	19.3	19.9	21.0	22.0	23.7	28.0	31.4	31.9	30.6	34.9	33.7	34.1	35.1	32.2	33.8	35.6	32.1	33.5	32.3	-1.2
	19-22	18.9	19.4	19.3	16.4	17.2	20.8	21.2	24.4	28.5	31.6	30.7	25.3	30.2	30.0	33.2	35.2	29.1	31.4	32.1	32.7	29.4	30.2	+0.7
	23-26					18.6	18.1	21.0	22.3	28.4	31.2	28.1	25.6	25.7	25.7	29.2	29.3	32.3	30.5	35.1	31.9	25.7	26.6	+0.9
	27-30									23.6	27.4	29.5	22.1	25.6	28.5	24.4	30.7	29.5	30.0	28.3	33.0	29.3	29.9	+0.6
Some other narcotic	18	29.4	29.6	30.4	30.0	32.1	33.1	32.2	33.0	35.8	38.3	38.1	34.6	37.1	37.5	38.0	39.8	40.0	38.9	42.8	40.8	43.9	40.5	-3.4
	19-22	32.7	32.4	30.8	31.0	28.7	34.3	32.6	33.8	37.9	37.9	35.6	35.4	35.2	33.5	35.1	38.7	37.3	38.3	38.9	39.5	41.1	44.1	+3.0
	23-26					32.8	32.1	33.6	32.2	35.9	36.4	34.7	33.2	33.9	33.1	35.8	32.6	36.7	35.7	39.9	38.2	38.1	35.8	-2.3
	27-30									31.6	36.2	36.1	29.0	31.8	33.0	34.8	36.9	37.2	35.2	32.2	36.9	32.4	39.4	+7.0
Amphetamines	18	61.3	69.5	70.8	68.5	68.2	66.4	64.3	64.5	63.9	64.3	59.7	57.3	58.8	61.5	62.0	62.8	59.4	59.8	60.8	58.1	57.1	57.1	0.0
	19-22	71.7	72.6	73.5	69.7	69.1	69.1	63.1	61.8	61.3	62.2	57.7	58.3	56.3	56.0	56.6	60.3	56.9	55.5	56.3	57.6	60.2	56.5	-3.7
	23-26					65.8	66.0	64.5	65.3	62.2	60.1	55.8	54.8	54.5	52.6	52.9	56.0	52.8	51.2	53.2	49.1	51.1	49.4	-1.7
	27-30									54.3	58.6	55.3	54.4	50.4	52.9	48.3	53.7	51.7	48.1	41.4	48.2	47.6	49.3	+1.6
Crystal meth. (Ice)	18	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	24.0	24.3	26.0	26.6	25.6	27.0	26.9	27.6	29.8	27.6	27.8	28.3	+0.5
	19-22	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	24.0	21.8	22.5	20.9	24.7	25.5	25.4	29.3	31.0	31.8	27.4	28.4	+1.1
	23-26					NA	NA	NA	NA	NA	NA	22.3	20.0	21.3	22.9	24.5	24.7	24.7	25.8	30.2	28.5	25.8	26.4	+0.6
	27-30									NA	NA	27.3	19.7	22.0	21.2	21.7	25.8	26.1	25.1	22.6	29.1	25.3	27.6	+2.3
Barbiturates	18	49.1	54.9	55.2	52.5	51.9	51.3	48.3	48.2	47.8	48.4	45.9	42.4	44.0	44.5	43.3	42.3	41.4	40.0	40.7	37.9	37.4	35.7	-1.7
	19-22	59.5	61.1	56.8	54.2	48.1	52.7	46.8	44.6	45.5	47.7	44.2	41.7	43.4	41.9	40.6	42.9	41.1	39.8	39.2	42.3	40.6	39.3	-1.3
	23-26					52.7	47.7	46.4	45.9	47.4	44.8	41.6	39.6	42.0	38.8	40.3	42.1	40.6	39.1	42.6	39.7	37.6	36.1	-1.5
	27-30									43.2	44.5	44.2	38.5	37.8	39.7	37.4	39.9	41.2	39.1	33.9	38.4	36.1	38.1	+2.0

(Table continued on next page)

TABLE 7-4 (cont.)

Trends in Reported Availability of Drugs

High School Seniors (Age 18) and Young Adults in Modal Age Groups of 19-22, 23-26, and 27-30

(Entries are percentages)

Percentage saying "fairly easy" or "very easy" to get[a]

Q. How difficult do you think it would be for you to get each of the following types of drugs, if you wanted some?	Age Group	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00-'01 change
Tranquilizers	18	59.1	60.8	58.9	55.3	54.5	54.7	51.2	48.6	49.1	45.3	44.7	40.8	40.9	41.1	39.2	37.8	36.0	35.4	36.2	32.7	33.8	33.1	-0.6
	19-22	67.4	62.8	62.0	62.3	52.5	55.6	52.9	50.3	50.0	49.4	45.4	44.8	40.7	40.9	41.0	40.2	37.6	37.8	36.8	37.1	36.5	34.9	-1.6
	23-26					60.2	54.3	54.1	56.3	52.8	51.4	47.8	45.1	48.1	43.2	45.9	44.3	42.3	36.4	39.4	38.3	37.6	38.7	+1.1
	27-30									55.3	54.4	54.9	47.5	47.8	47.4	44.4	44.8	46.2	41.9	39.9	41.5	36.7	42.9	+6.2
Steroids	18	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	46.7	46.8	44.8	42.9	45.5	40.3	41.7	44.5	44.6	44.8	44.4	-0.4
	19-22	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	44.1	44.8	46.3	41.7	40.9	41.8	40.8	39.2	39.2	40.5	40.3	38.1	-2.2
	23-26					NA	NA	NA	NA	NA	NA	37.6	35.8	39.3	35.8	37.0	37.4	33.9	35.5	34.9	37.1	34.0	34.7	+0.7
	27-30									NA	NA	36.4	30.6	35.0	31.6	30.5	33.1	35.6	32.5	30.5	34.5	36.2	34.6	-1.7
Approximate Weighted N=	*18*	*3240*	*3578*	*3602*	*3385*	*3269*	*3274*	*3077*	*3271*	*3231*	*2806*	*2549*	*2476*	*2586*	*2670*	*2526*	*2552*	*2340*	*2517*	*2520*	*2215*	*2095*	*1850*	
	19-22	*582*	*601*	*582*	*588*	*559*	*571*	*592*	*581*	*568*	*572*	*571*	*534*	*512*	*480*	*459*	*470*	*467*	*463*	*433*	*425*	*400*	*398*	
	23-26					*540*	*541*	*548*	*539*	*526*	*514*	*532*	*511*	*523*	*500*	*463*	*449*	*418*	*419*	*395*	*415*	*388*	*401*	
	27-30									*519*	*513*	*510*	*487*	*475*	*473*	*437*	*446*	*468*	*459*	*425*	*424*	*365*	*357*	

Source: The Monitoring the Future Study, the University of Michigan.

NOTES: Level of significance of difference between the two most recent years: s = .05, ss = .01, sss = .001. Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding.

'NA' indicates data not available.

[a] Answer alternatives were: (1) Probably impossible, (2) Very difficult, (3) Fairly difficult, (4) Fairly easy, and (5) Very easy.

[b] In 2001 the question text was changed from "other psychedelics" to "other hallucinogens" and "shrooms" was added to the list of examples. These changes likely explain the discontinuity in the 2001 results.

Chapter 8

PREVALENCE OF DRUG USE AMONG COLLEGE STUDENTS

For a number of reasons college students are an important segment of the general population in almost any nation. They often are the harbingers of social and political changes that will spread eventually to all segments of the population. This was certainly the case for the epidemic of illicit drug use that emerged in the American population in the late 1960s and continues today.

The Monitoring the Future study has generated an excellent annual national sample of college students since 1980. The 2001 survey is the twenty-second such survey of this population. (The absence of dropouts in the original high school senior samples should have practically no effect on the college sample, since very few dropouts go on to college.) Perhaps the major limitation of the present design for the purpose of characterizing college students is that it limits the age range of the college sample. For trend estimation purposes, we decided to limit the age band to the most typical one for college attendance, that is, one to four years past high school, which corresponds to the modal ages of 19 to 22. According to statistics from the United States Bureau of the Census,[32] this age band should encompass about 77% of all undergraduate college students enrolled full-time in 2000, down some from the 79% covered in 1989. Although expanding the age band to be covered by an additional two years would cover 84% of all enrolled college students, it would also reduce by two years the interval over which we could report trend data. Some special analyses conducted in 1985 indicated that the differences in *prevalence of use* estimates under the two definitions were extremely small. The annual prevalence of all drugs except cocaine shifted only about one- or two-tenths of a percent, based on comparisons made in 1985. Cocaine, which has the greatest amount of age-related change, would have had an annual prevalence rate only 0.8% higher if the six-year age span were included rather than the four-year age span. A replication of these analyses in 1997 yielded virtually the same results. Thus, for purposes of estimating all prevalence rates except lifetime prevalence, the four-year and six-year intervals are nearly interchangeable.

On the positive side, controlling the age band may be desirable for trend estimation purposes, because it controls for changes in the age composition of college students over the years. Otherwise, college students characterized in one year might represent a noncomparable segment of the larger population when compared to college students surveyed in another year.

College students are defined here as those follow-up respondents one to four years past high school who say they were registered as full-time students in a two- or four-year college at the beginning of March in the year in question. Thus, the definition encompasses only those who are one to four years past high school and are active, full-time undergraduate college students in the year in question. Note that students at two-year colleges, such as community colleges, are included. The definition excludes those who previously may have been college students or may have completed college.

---

[32] U.S. Bureau of the Census, October 2000. Available on Internet: http://www.census.gov.

Prevalence of use rates for college students, as well as their same-age peers who are also high school graduates, are provided in Tables 8-1 to 8-5. Having statistics for both groups makes it possible to see whether college students are above or below their age peers (19- to 22-year-olds not currently in college) in terms of their usage rates. The college-enrolled sample now constitutes over half (58%) of the entire follow-up sample one to four years past high school. The differences reported here pertain to differences between those who are in college versus those who are not, *among high school graduates.* If data from the missing high school dropout segment were available for inclusion as part of the noncollege segment, any difference between the two groups likely would be enlarged; therefore, any differences observed here are only an indication of the direction and relative size of differences between the college and the *entire* noncollege-enrolled population, not an absolute estimate of them.

PREVALENCE OF DRUG USE: COLLEGE STUDENTS VERSUS THOSE NOT IN COLLEGE

In the year 2001, lifetime prevalence of use among college students is lower for all drugs than among their age peers, but the degree of difference varies considerably by drug, as Table 8-1 shows. However, there is much less difference between the two groups on annual or 30-day prevalence of use rates. (See Tables 8-2 and 8-3.) Alcohol use is the one drug that stands apart from the others as being higher among college students than among those not enrolled in college.

- In 2001, annual prevalence for the use of ***any illicit drug*** among college students stands at 38%, compared to 41% among those high school graduates not in college. A similar difference exists for the annual prevalence of ***any illicit drug other than marijuana*** (16% versus 23%).

- Annual ***marijuana*** use is slightly lower among college students than among high school graduates of the same age (36% versus 38%). However, their rate of current ***daily marijuana*** use is considerably lower (4.5% versus 9.4%). (See Table 8-4 for the prevalence of current daily use.)

- Among those drugs for which annual prevalence is higher among the noncollege group, ***cocaine, ecstasy,*** and ***LSD*** show the largest absolute difference in annual prevalence: 4.7% for college students versus 9.6% for those not in college for cocaine, 9.2% versus 13.6% for ecstasy, and 4.0% versus 8.0% for LSD.

- The next largest absolute difference occurs for ***tranquilizers***, with 5.1% of the college students versus 8.6% of the others reporting use in the past year, followed by ***hallucinogens*** at 7.5% versus 10.3%, ***amphetamines*** at 7.2% versus 9.9%, ***narcotics other than heroin*** at 5.7% versus 8.5%, and ***barbiturates*** at 3.8% versus 6.7%.

- Annual use of ***crystal methamphetamine*** (***ice***) is also less prevalent among college students than among their noncollege age peers, at 0.6% versus 2.7%, respectively.

- ***Crack*** was used by fewer college students (0.9% annual prevalence) than by 19- to 22-year-olds not in college full-time (2.5%) in 2001.

- The annual prevalences of ***inhalants*** and ***heroin*** are slightly lower among college students than among their noncollege-student peers (2.8% and 0.4% vs. 3.1% and 1.3%, respectively).

- In 2001, college students were not significantly different in prevalence of lifetime or annual use of ***alcohol*** but were higher than their age peers in monthly use (67% versus 62%).

  College students also had a somewhat higher prevalence of ***occasions of heavy drinking*** (five or more drinks in a row in the past two weeks)—41% versus 37% among their age peers. On the other hand, they reported lower rates of daily drinking than their age peers (4.7% versus 5.2%).

  In sum, college students were more likely to drink in the past 30 days and to engage in occasional heavy drinking, but they had a lower rate of daily drinking.

- Among all substances studied, both licit and illicit, the largest absolute difference between the two groups occurs for ***cigarette smoking***. For example, the college student prevalence of daily smoking is "only" 15% versus 33% for high school graduates the same age who are currently not full-time college students. Smoking at the rate of a half-pack per day stands at 8% versus 25% for these two groups, respectively. Recall that the high school senior data show the college-bound to have much lower smoking rates in high school than the noncollege-bound; thus, these substantial differences observed at college age actually preceded college attendance.[33] The smoking differences would be even greater if dropouts were included in the noncollege groups, since they have an exceptionally high rate of smoking.

GENDER DIFFERENCES IN PREVALENCE OF USE AMONG COLLEGE STUDENTS

Tabular data are provided separately in Tables 8-1 to 8-5 for male and female college students and their same-age peers.

- Most of the gender differences among college students replicate those discussed earlier for all young adults 1 to 14 years past high school, and they in turn replicate gender differences among secondary school students for the most part. That means that among college students, males have higher annual prevalence rates for most of the illicit drugs. The rates for use of ***any illicit drug*** are 39% versus 37%; for ***any illicit drug other than marijuana***, 17% versus 16%; for ***marijuana***, 37% versus 35%; for ***hallucinogens***, 9% versus 7%; and for ***LSD*** specifically, 5% versus 3%.

---

[33] See also Bachman, J. G., Wadsworth, K. N., O'Malley, P. M., Johnston, L. D., & Schulenberg, J. (1997). *Smoking, drinking, and drug use in young adulthood: The impacts of new freedoms and new responsibilities.* Mahwah, NJ: Lawrence Erlbaum Associates.

- ***Daily marijuana*** use is higher among male college students (6%) than among females (4%).

- Male college students do not differ significantly in rates of ***occasional heavy drinking*** compared to their male counterparts who are not in college (48% versus 49%), but female college students have higher rates than their noncollege peers (36% versus 28%).

- ***Cigarette smoking*** is one substance-using behavior for which the gender differences are different among the college students than they are among their age peers not in college. The noncollege segment has a slightly higher rate of smoking among males than among females (for example, in 2001, 35% of noncollege males smoked daily compared to 32% of noncollege females). But college women are slightly more likely to be daily smokers than college men (16% versus 14%). Smoking a half-pack or more per day is slightly higher among noncollege men than noncollege women (26% versus 24%), while the rates for college men and women are virtually identical (8%).

- For a number of drugs in which college students have lower annual prevalence overall, those differences are caused largely or exclusively by the differences between college and noncollege males. (Put another way, the females from these two groups are not nearly as different in their use of these drugs as are the males. See Table 8-2.) These drugs include ***marijuana***, ***hallucinogens***, ***LSD*** specifically, ***cocaine***, and ***tranquilizers***.

- On the other hand, it is the noncollege females who account for the overall college versus noncollege differences in the use of ***barbiturates*** and ***amphetamines***.

In sum, the noncollege segment is generally more drug-experienced than the college student segment. This pattern is a continuation of the high school scenario in which those without college plans are more likely to use drugs. The only instance in which college students are more likely to use a particular drug is with alcohol. With this drug, occasional heavy drinking stands out as being much more prevalent among college students, whereas daily drinking is more likely among those not in college.

TABLE 8-1
Lifetime Prevalence of Use for Various Types of Drugs, 2001: Full-Time College Students vs. Others Among Respondents 1-4 Years Beyond High School

(Entries are percentages)

	Total		Males		Females	
	Full-time College	Others	Full-time College	Others	Full-time College	Others
Any Illicit Drug[a]	53.6	63.0	53.9	65.7	53.5	61.0
Any Illicit Drug[a] Other than Marijuana	26.3	37.0	27.0	38.4	25.9	36.0
Marijuana	51.0	60.9	52.4	64.5	50.2	58.2
Inhalants[b,c]	9.6	15.1	13.8	18.0	6.8	12.8
Hallucinogens[c]	14.8	22.4	16.5	24.0	13.6	21.2
LSD	12.2	20.1	14.4	21.7	10.7	18.9
Cocaine	8.6	18.1	9.7	20.4	7.9	16.3
Crack	2.0	7.9	2.2	8.4	1.9	7.5
MDMA (Ecstasy)[d]	14.7	17.7	14.4	16.7	14.8	18.5
Heroin	1.2	3.4	1.3	3.6	1.2	3.2
Other Narcotics[e]	11.0	15.6	13.3	19.0	9.5	13.0
Amphetamines, Adjusted[e,f]	12.4	19.9	13.7	20.2	11.5	19.8
Ice[d]	2.3	6.9	2.7	6.0	2.0	7.6
Barbiturates[e]	6.0	12.4	7.5	12.2	4.9	12.6
Tranquilizers[e]	9.7	14.9	10.8	15.5	8.9	14.5
Alcohol	86.1	86.2	86.0	86.4	86.2	86.0
Cigarettes	NA	NA	NA	NA	NA	NA
Approximate Weighted N =	*1340*	*960*	*540*	*420*	*800*	*540*

Source: The Monitoring the Future Study, the University of Michigan.

[a] Use of "any illicit drug" includes any use of marijuana, hallucinogens, cocaine, or heroin, or any use of other narcotics, amphetamines, barbiturates, or tranquilizers not under a doctor's orders.

[b] This drug was asked about in three of the six questionnaire forms. Total N in 2001 for college students is approximately 670.

[c] Unadjusted for known underreporting of certain drugs. See text for details.

[d] This drug was asked about in two of the six questionnaire forms. Total N in 2001 for college students is approximately 450.

[e] Only drug use which was not under a doctor's orders is included here.

[f] Based on the data from the revised question, which attempts to exclude inappropriate reporting of nonprescription amphetamines.

TABLE 8-2

Annual Prevalence of Use for Various Types of Drugs, 2001: Full-Time College Students vs. Others Among Respondents 1-4 Years Beyond High School

(Entries are percentages)

	Total		Males		Females	
	Full-time College	Others	Full-time College	Others	Full-time College	Others
Any Illicit Drug[a]	37.9	41.3	38.8	44.3	37.3	39.0
Any Illicit Drug[a] Other than Marijuana	16.4	22.8	17.2	25.3	15.8	20.9
Marijuana	35.6	37.6	36.9	41.2	34.6	34.8
Inhalants[b,c]	2.8	3.1	4.7	3.2	1.5	3.1
Hallucinogens[c]	7.5	10.3	8.7	12.6	6.7	8.5
LSD	4.0	8.0	5.4	9.7	3.0	6.7
Cocaine	4.7	9.6	6.1	11.4	3.9	8.2
Crack	0.9	2.5	0.8	2.8	0.9	2.2
MDMA (Ecstasy)[d]	9.2	13.6	8.0	12.7	9.9	14.3
Heroin	0.4	1.3	0.5	1.3	0.3	1.2
Other Narcotics[e]	5.7	8.5	6.9	10.3	5.0	7.1
Amphetamines, Adjusted[e,f]	7.2	9.9	8.7	9.6	6.1	10.2
Ice[d]	0.6	2.7	0.7	2.8	0.5	2.6
Barbiturates[e]	3.8	6.7	5.0	6.6	3.1	6.7
Tranquilizers[e]	5.1	8.6	5.7	10.1	4.8	7.5
Alcohol	83.0	80.9	82.6	82.2	83.3	79.8
Cigarettes	39.0	54.9	38.8	56.7	39.1	53.6
Approximate Weighted N =	*1340*	*960*	*540*	*420*	*800*	*540*

Source: The Monitoring the Future Study, the University of Michigan.

[a] Use of "any illicit drug" includes any use of marijuana, hallucinogens, cocaine, or heroin, or any use of other narcotics, amphetamines, barbiturates, or tranquilizers not under a doctor's orders.

[b] This drug was asked about in three of the six questionnaire forms. Total N in 2001 for college students is approximately 670.

[c] Unadjusted for known underreporting of certain drugs. See text for details.

[d] This drug was asked about in two of the six questionnaire forms. Total N in 2001 for college students is approximately 450.

[e] Only drug use which was not under a doctor's orders is included here.

[f] Based on the data from the revised question, which attempts to exclude inappropriate reporting of nonprescription amphetamines.

TABLE 8-3

Thirty-Day Prevalence of Use for Various Types of Drugs, 2001: Full-Time College Students vs. Others Among Respondents 1-4 Years Beyond High School

(Entries are percentages)

	Total		Males		Females	
	Full-time College	Others	Full-time College	Others	Full-time College	Others
Any Illicit Drug[a]	21.9	26.9	25.0	30.3	19.8	24.3
Any Illicit Drug[a] Other than Marijuana	7.5	10.7	9.0	11.9	6.4	9.8
Marijuana	20.2	24.5	22.7	28.1	18.5	21.7
Inhalants[b,c]	0.4	1.0	0.1	0.6	0.5	1.3
Hallucinogens[c]	1.8	2.7	2.6	3.8	1.3	1.8
LSD	1.0	2.1	1.3	2.6	0.8	1.7
Cocaine	1.9	3.7	2.5	4.8	1.6	2.9
Crack	0.1	1.0	0.3	0.9	*	1.0
MDMA (Ecstasy)[d]	1.5	4.0	1.2	5.0	1.7	3.2
Heroin	0.1	0.6	0.1	0.8	0.1	0.5
Other Narcotics[e]	1.7	3.0	2.4	3.9	1.3	2.3
Amphetamines, Adjusted[e,f]	3.3	3.5	3.7	4.4	3.1	2.9
Ice[d]	0.1	1.1	0.2	1.4	0.0	0.9
Barbiturates[e]	1.5	3.4	1.9	3.8	1.2	3.1
Tranquilizers[e]	1.5	3.7	1.8	4.3	1.3	3.2
Alcohol	67.0	62.4	70.4	68.1	64.6	58.2
Cigarettes	25.7	43.9	24.6	45.9	26.5	42.4
Approximate Weighted N =	*1340*	*960*	*540*	*420*	*800*	*540*

Source: The Monitoring the Future Study, the University of Michigan.

'*' indicates a percentage of less than 0.05% but greater than true zero.

[a] Use of "any illicit drug" includes any use of marijuana, hallucinogens, cocaine, or heroin, or any use of other narcotics, amphetamines, barbiturates, or tranquilizers not under a doctor's orders.

[b] This drug was asked about in three of the six questionnaire forms. Total N in 2001 for college students is approximately 670.

[c] Unadjusted for known underreporting of certain drugs. See text for details.

[d] This drug was asked about in two of the six questionnaire forms. Total N in 2001 for college students is approximately 450.

[e] Only drug use which was not under a doctor's orders is included here.

[f] Based on the data from the revised question, which attempts to exclude inappropriate reporting of nonprescription amphetamines.

TABLE 8-4

Thirty-Day Prevalence of Daily Use for Various Types of Drugs, 2001: Full-Time College Students vs. Others Among Respondents 1-4 Years Beyond High School

(Entries are percentages)

	Total		Males		Females	
	Full-time College	Others	Full-time College	Others	Full-time College	Others
Marijuana	4.5	9.4	5.7	11.8	3.8	7.6
Cocaine	0.0	0.2	0.0	0.3	0.0	0.1
Amphetamines, Adjusted[a,b]	0.2	0.3	0.1	0.1	0.2	0.5
Alcohol						
Daily	4.7	5.2	7.2	8.0	2.9	3.1
5+ drinks in a row in past 2 weeks	40.9	36.9	48.1	48.9	36.0	27.8
Cigarettes						
Daily	15.0	33.4	14.2	35.2	15.5	32.0
Half-pack or more per day	7.8	24.7	7.8	26.3	7.7	23.5
Approximate Weighted N =	*1340*	*960*	*540*	*420*	*800*	*540*

Source: The Monitoring the Future Study, the University of Michigan.

'*' indicates a prevalence rate of less than 0.05% but greater than true zero.

[a] Only drug use which was not under a doctor's orders is included here.

[b] Based on the data from the revised question, which attempts to exclude inappropriate reporting of nonprescription amphetamines.

TABLE 8-5

Lifetime, Annual, and Thirty-Day Prevalence of an Illicit Drug Use Index[a], 2001: Full-Time College Students vs. Others Among Respondents 1-4 Years Beyond High School

(Entries are percentages)

	Total		Males		Females	
	Full-time College	Others	Full-time College	Others	Full-time College	Others
	Percentage Reporting Use in Lifetime					
Any Illicit Drug	53.6	63.0	53.9	65.7	53.5	61.0
Any Illicit Drug Other than Marijuana	26.3	37.0	27.0	38.4	25.9	36.0
	Percentage Reporting Use in Last Twelve Months					
Any Illicit Drug	37.9	41.3	38.8	44.3	37.3	39.0
Any Illicit Drug Other than Marijuana	16.4	22.8	17.2	25.3	15.8	20.9
	Percentage Reporting Use in Last Thirty Days					
Any Illicit Drug	21.9	26.9	25.0	30.3	19.8	24.3
Any Illicit Drug Other than Marijuana	7.5	10.7	9.0	11.9	6.4	9.8
Approximate Weighted N =	*1340*	*960*	*540*	*420*	*800*	*540*

Source: The Monitoring the Future Study, the University of Michigan.

[a] Use of "any illicit drug" includes any use of marijuana, hallucinogens, cocaine, or heroin, or any use of other narcotics, amphetamines, barbiturates, or tranquilizers not under a doctor's orders.

Chapter 9

TRENDS IN DRUG USE AMONG COLLEGE STUDENTS

Beginning in the mid-1960s, illicit drug use increased dramatically among American college students, then spread quickly to their noncollege age peers, and eventually down the age spectrum to high school students, and even to middle school students. College students were thus the leading edge of social change in illicit drug use. As we shall see in this chapter, the diffusion process seems to have reversed during the "relapse" of the epidemic in the 1990s, as use first increased among those in early adolescence and then radiated *up* the age spectrum as those cohorts aged.

In this chapter we continue to use the same definition of college students described in Chapter 8: high school graduates one to four years past high school who are enrolled full-time in a two-year or four-year college at the beginning of March in the year in question. For comparison purposes, trend data are provided on the remaining follow-up respondents who are also one to four years past high school. (See Figures 9-1 through 9-15.) Because the rate of college enrollment declines steadily with number of years beyond high school, the comparison group is slightly older on the average than the college-enrolled group. It is also worth noting that the proportion of young adult high school graduates one to four years beyond high school who are enrolled full-time in college has increased considerably over the past twenty-two surveys. In 2001, about 58% of the weighted number of follow-up respondents one to four years past high school met our definition of college students, compared with only 38% in the 1980 survey. That represents a substantial increase over the past two decades in the proportion of high school graduates attending college. The reader is reminded that the difference between the enrolled group and the other group estimates the degree to which college students are above or below average for other high school *graduates* in this age band. Were we able to include the high school dropout segment in the calculation for the noncollege group, many of the differences with the college-enrolled likely would be accentuated.

For each year given, there are approximately 1,100-1,500 weighted respondents constituting the college student sample (see Table 9-5 for Ns per year) and roughly 1,000-1,700 respondents constituting the "other" group one to four years past high school. Comparisons of the trends for these two groups are provided in this chapter. Because it was not until 1980 that enough follow-up years had accrued to characterize young people one to four years past high school, the comparisons begin with that year.

TRENDS IN PREVALENCE 1980-2001: COLLEGE STUDENTS VERSUS THOSE NOT IN COLLEGE

- The proportion of college students using ***any illicit drug*** in the 12 months prior to the survey (i.e., the annual prevalence rate) dropped fairly steadily between 1980 and 1991 (from 56% to 29%). (See Table 9-2.) In other words, illicit drug use fell by nearly half over the 11-year period 1980-1991. After 1991, annual (and also 30-day) prevalence held fairly steady for a couple of years before beginning to rise, reaching 38% in 1998—still well below the peak of 56% in 1980. There has been little change since (38% in 2001).

  The noncollege group moved similarly from 1980 to 1998. High school seniors also showed a similar trajectory in the decline phase through 1991, but their rise in use after 1992 was distinctly sharper, as Figure 9-1 illustrates. All three groups showed a leveling after 1998. However, in 2000, the noncollege group exhibited a four percentage point increase that was due largely to their sharper increase in ecstasy use in that year.

- Use of ***any illicit drugs other than marijuana*** declined fairly steadily among college students between 1980 and 1994, with annual prevalence dropping by nearly two-thirds from 32% to 12% (Table 9-2). This generally paralleled the trend for the noncollege group as well as for high school seniors. All three groups showed some increase in use during the 1990s; the high school seniors after 1992, the noncollege group after 1993, and the college students after 1994. However, the rise in use of illicit drugs other than marijuana was not as sharp among college students as it was in either of the two other groups (Figure 9-2). Since 1999 the college students and noncollege segment have shown some further increase (particularly the noncollege group), whereas use among the high school seniors has held steady. This most likely reflects some cohort effects working their way up the age spectrum.

  In general, among those enrolled in college, the trends during the 1980s for most individual classes of illicit drugs tended to parallel those for the noncollege group and those observed among seniors. During the 1990s, however, there was more divergence in the trends, with the college students usually showing less increase than the high school seniors and, for some drugs, less increase than their age-mates not in college.

- The annual prevalence of ***marijuana*** use among college students decreased steadily from 1981 through 1991, dropping by nearly half from 51% to 27% (Figure 9-3a). Their noncollege peers showed a comparable decline over the same time interval (Figure 9-3a). Use among high school seniors rose sharply after 1992, while use among college students and their age peers rose only very slightly until 1995 or 1996 when use rose more. From 1991 through 1998, annual prevalence rose by nearly 10 percentage points among college students, by 7 percentage points among other young adults, and by 14 percentage points among twelfth graders. The twelfth graders were the first to show a leveling off in marijuana use (in 1998), followed by the college students two years later. Use among the noncollege group has yet to level.

- ***Daily marijuana*** use among college students (Figure 9-3b) fell appreciably between 1980 and 1986, from 7.2% to 2.1%, as it did for those not in college and among high school seniors. (The latter two groups were able to show sharper declines because they started higher than the college students in 1980.) After 1986, the decline decelerated, and by 1991 the rate stood at 1.8%. In sum, the proportion of American college students who actively smoked marijuana on a daily basis dropped by about three-fourths between 1980 and 1991. Daily use then leveled until 1994 and began increasing thereafter, reaching 4.6% in 2001. The other two groups showed considerably larger increases after 1993 than did college students, and their daily use rates leveled after 1997.

- An appreciable and ongoing decline occurred for ***amphetamine*** use between 1981 and 1991 (Figure 9-11). Annual prevalence among college students dropped by more than eight-tenths, from 22% in 1981 to 4% in 1991. Proportionately, this was a larger drop than among high school seniors, but fairly parallel to the overall change among age peers not in college. Amphetamine use among college students and their noncollege age peers leveled for a year before beginning to increase in both groups after 1992 and 1993, respectively, continuing through 2001. Over the years, those not in college consistently have reported a higher rate of amphetamine use than the college students, and since the mid-1980s high school seniors have reported higher rates still.

- During the early 1980s, one of the largest proportional declines observed among college students was for ***LSD*** (see Figure 9-6). Annual prevalence fell from 6.3% in 1982 to 2.2% in 1985. After 1985, use began to increase, reaching 5.7% by 1992. Since then use has remained fairly level, while use among young adults not in college and high school seniors showed a considerable increase between 1993 and 1996. For whatever reason, college students did not show the same resurgence in LSD use in the mid-1990s that other young people did; in fact their use has been gradually declining since then, giving them lower levels of LSD use than the other two groups.

- After 1997 there was a sharp increase in the use of ***ecstasy*** (***MDMA***) by American college students (Figure 9-8). Their annual prevalence rose three- to fourfold in just three years, from 2.4% in 1997 to 9.1% in 2000, before it leveled in 2001 at 9.2%. The trends among college students have run fairly parallel to those for the noncollege segment and high school seniors, at least until 2001. In that year the noncollege segment showed a continuing sharp rise of ecstasy use—giving them the highest annual prevalence at 14%—whereas use among the college students leveled and among the twelfth graders decelerated considerably. Both of the latter groups had an annual prevalence of 9% in 2001.

- When the college data were first available in 1980, ***barbiturate*** use (Figure 9-12) already was quite low among college students (at 2.9% annual prevalence), but it fell by more than half to 1.3% by 1985. This proportional decline was, once again, sharper than among high school seniors and less sharp than among the young adults not in college, both of whom started at a higher level of use. Annual prevalence remained essentially unchanged between 1985 and 1993 among all three groups (see Figure 9-12). The groups then showed a gradual increase in use between 1993 (or 1994 in the case of the college students) and 2001, except for the seniors whose use leveled in 2001.

- Figure 9-13 shows that the annual prevalence of ***tranquilizer*** use among college students dropped by half in the period 1980-1984, from 6.9% to 3.5%, and again fell by half between 1984 and 1994, to 1.8%.[34] After this long period of gradual decline, tranquilizer use began to increase gradually, reaching 5.1% by 2001. Use in the noncollege segment dropped more sharply in the early 1980s, reducing the differences among the three groups. Tranquilizer use also dropped steadily among seniors, from 10.8% in 1977 to 2.8% in 1992, before rising to 6.5% by 2001. In fact, use rose in all three groups after 1994 and in 2001 is at its recent high in all three groups. In the past two years the increase in use has been particularly sharp among the noncollege segment.

- The overall trends in the use of ***narcotics other than heroin*** have been quite parallel to those for sedatives and tranquilizers. By 1994, the use of narcotics other than heroin (Figure 9-10) by college students was about half what it was in 1980 (2.4% in 1994 versus 5.1% in 1980) as a result of a gradual decline over the interval. This trend closely parallels use among noncollege young adults and high school seniors. As with a number of other drugs, use among seniors began to rise after 1992, but use among college students did not begin to increase until after 1994. College student annual prevalence reached 5.7% by 2001. While use leveled in 2001 among seniors, it continued to show a rise among the college students and especially among their noncollege age peers.

- Like the high school seniors, college students showed a relatively stable pattern of ***cocaine*** use between 1980 and 1986, when their usage levels (and those of their age peers) were considerably higher than those observed among twelfth graders. This level period was followed by a dramatic drop of nearly nine-tenths in annual prevalence among college students, from 17% in 1986 to 2% in 1994. (See Figure 9-9). Their noncollege counterparts also showed a large decline from 19% in 1986 to 5.1% in 1994. Use among college students dropped more sharply than among their age peers or among high school seniors, however, resulting in little or no difference between high school seniors and college students in annual prevalence rates for cocaine between 1990 and 1995. Since then, cocaine use rose least among the college students, creating a reversal of the previous gap. Between 1994 and 1998 annual cocaine prevalence for college students increased significantly, from a 14-year low of 2.0% in 1994 to 4.5% in 1998, roughly where it stayed since. High school seniors and noncollege students also exhibited an increase in annual prevalence of cocaine use after 1992 and 1993, respectively. Use has been level among college students since 1999 and has dropped among twelfth graders since then, but it continues to rise among the young adults who are not in college.

---

[34] The use of barbiturates and tranquilizers very likely dropped during the latter half of the 1970s, as well, judging by the trends among high school seniors.

- College students have shown some shifts in ***alcohol*** use that are different from those observed either among their age peers not in college or among high school seniors. As can be seen in Figure 9-14d, both the noncollege segment and the high school seniors showed fairly substantial declines from 1981 through 1990 in the prevalence of having ***five or more drinks in a row*** during the prior two weeks. (The high school seniors then showed further decline for three more years.) In contrast, the college students showed no decline in binge drinking from 1981 to 1986, and then only a modest decline of 5 percentage points from 1986 through 1993. In the 11-year period between 1981 (when all three populations were very close in use) and 1992, this measure of heavy drinking dropped by 14 percentage points among high school seniors, by 11 percentage points among the noncollege 19- to 22-year-olds, but by only 2 percentage points among college students. After 1992, binge drinking began to rise among twelfth graders while it still was declining some among college students, narrowing the gap somewhat. Binge drinking also then began to increase among the noncollege segment after 1995 and by less among college students after 1996—increases that continued into 2001. Meanwhile, among twelfth graders, binge drinking started a gradual decline after 1998, enlarging the difference between them and the other two groups in which this behavior was still rising.

  It is interesting to conjecture why college students did not show much decline in heavy drinking for a decade (1981-1991) while their noncollege peers and high school seniors did. One possibility is that campuses provided some insulation to the effects of changes in the drinking age laws. Also, individuals who are under the legal drinking age in college are mixed in with peers who are of legal age to purchase alcohol in a way that is no longer true in high schools and less true, perhaps, for those 19 to 22 who are not in college. Finally, much alcohol advertising was directed specifically at the college student population.

  On the other hand, college students generally have had slightly lower rates of ***daily drinking*** than their age group taken as a whole, though by the early 1990s such differences nearly disappeared (Figure 9-14c). Daily drinking among the young adults (1-4 years past high school) not enrolled in college declined from 8.7% in 1981 to 6.5% in 1984, remained essentially unchanged through 1988, declined further (to 3.2%) by 1994, and has since increased to 5.2% by 2001. The daily drinking estimates for college students—these appear a little less stable, perhaps due to smaller sample sizes in the 1980s—showed little or no decline between 1980 (6.5%) and 1984 (6.6%) but a considerable decline through 1995 (to 3.0%), followed by some increase to 4.7% in 2001. High school seniors also showed a similar pattern of daily drinking with a long period of decline, followed by a somewhat earlier reversal, beginning in 1994. In the past several years all three groups have had fairly level rates of daily drinking.

- ***Cigarette smoking*** among American college students (Figure 9-15a) declined modestly in the first half of the 1980s. Thirty-day prevalence fell from 26% to 22% between 1980 and 1985, remained fairly stable through 1990 (22%), then increased gradually but substantially, reaching 31% in 1999. It was not until 2000 that the first evidence of a decline in smoking among college students began to appear, two years after the high school seniors had begun to exhibit their decline in current smoking. This lag no doubt reflects a cohort effect operating through generational replacement. The noncollege group, however, showed a significant further increase in their smoking rates in 2001.

  The ***daily smoking*** rate for college students (Figure 9-15b) fell from 18.3% in 1980 to 12.7% in 1986, as the cohorts who had lower initiation rates by senior year replaced the earlier, heavier smoking cohorts. It remained fairly level through 1990 (12.1%) but by 1999 rose to 19%, the highest level of daily smoking we have recorded among American college students since we began tracking them in 1980. (The 1999 30-day prevalence rate is also the highest we have recorded.) In 2000 and 2001, both statistics began to decline sharply among college students.

  While the rates of smoking have consistently been lower among college students than among those the same age who were not in college, the trends for these two groups diverged some after 1984, as smoking rates more or less stabilized among college students but continued to decline among young adults not in college (see Figure 9-15a). In fact, between 1989 and 1991 use began to rise among college students while continuing to decline among their peers. Both groups showed fairly parallel increases in smoking between about 1991 and 1999, after which use continued to increase among the noncollege segment but began to decline among college students. (High school seniors exhibited an increase from 1992 to 1997, and their use has been declining since.) The popularity of Camel cigarettes among the college-bound, which we have reported elsewhere, may help to explain some of the narrowing of the gap between college students and their age peers.[35] The Joe Camel advertising and promotion campaign, commenced in the late 1980s and ended in the late 1990s, may have succeeded in initiating more college students (particularly male students) to smoking than had been the case previously or since.

- For many drugs (***amphetamines, barbiturates***, and ***tranquilizers***), differences between college students and their noncollege age peers narrowed over the years.

---

[35] Johnston, L. D., O'Malley, P. M., Bachman, J. G., & Schulenberg, J. E. (1999). *Cigarette brand preferences among adolescents.* (Monitoring the Future Occasional Paper No. 45.) Ann Arbor, MI: Institute for Social Research.

Much of this is due to overall declines in usage rates generally during the 1980s, but some may also reflect the increasing proportion of the age group going to college.

The overall drug use trends among college students also are parallel, for the most part, to the trends among high school seniors, although declines in many drugs over the decade of 1980 to 1990 were proportionately larger among college students, and for that matter among all young adults of college age, than among high school seniors. Despite parallel trends to the early 1990s, the high school seniors have shown a larger, and often earlier, increase in the use of a number of drugs in the years since; and as indicated in Volume I, the eighth and tenth graders in secondary school showed increases a year earlier than the seniors. It is clear that this most recent upsurge or "relapse phase" in the illicit drug epidemic did not originate on the nation's campuses, as did the original epidemic. It originated among secondary school children, and the younger ones at that, and has been carried up the age spectrum—at least in part—through generational replacement. Put another way, there is evidence of some cohort effects at work.

GENDER DIFFERENCES IN TRENDS AMONG COLLEGE STUDENTS

One trend that is not obvious from the figures included here is the slow rise in the proportion of college students who are female. Females constituted 50% of our 1980 sample of college students compared to 60% of our 2001 sample. Given that substantial gender differences exist in the use of some drugs, we have been concerned all along that apparent long-term trends in the levels of drug use among college students might actually be attributable to changes in the gender composition of that population. For that reason, in particular, we have consistently presented separate trend lines for the male and female segments of the college student population. Differences in the trends observed for the two genders are illustrated in the lower panels of Figures 9-1 through 9-15 and are discussed next.

In general, trends in the use of the various drugs and in the overall drug use indexes have been highly parallel for male and female college students, as an examination of the relevant figures will show. The most noteworthy exceptions are mentioned below.

- Certain drug use measures showed a convergence of usage levels between the genders, mainly because they were converging toward zero. ***Daily marijuana*** use is one such example, with the decline among males between 1980 and 1986 narrowing the gap between the genders. Between 1986 and 1993 there was no further narrowing; but as use began to rise in the mid-1990s, a greater increase among males widened the gap. In 2001, the rates were 5.7% versus 3.8% for male and female college students, respectively. (See Figure 9-3b.)

- After 1986, ***cocaine*** use dropped more steeply for males than for females in general, and among male college students in particular, considerably narrowing the sizable gap between the genders (see Figure 9-9). Since 1991 both genders moved closely parallel, with males reporting somewhat higher usage rates (6.1% versus 3.9% for females in 2001).

- Like a number of other drugs, ***methaqualone*** also showed a convergence in use through 1989, with use among males declining more than among females (no figure given).

- ***Amphetamine*** use (Figure 9-11) also showed some convergence in the early 1980s due to a greater decline among males. In fact, male and female college student use has been essentially equal since 1989.

- The annual prevalence of ***alcohol*** use has been virtually identical for the two genders throughout the duration of the study (Figure 9-14a), but college males have consistently had higher rates of ***daily drinking*** and ***binge drinking*** (Figures 9-14c and 9-14d). From 1988 through 1994, binge drinking among college females decreased some (from 37% to 31%); but heavy drinking among college males declined more, from a high point in 1986 of 58% to a low of 47% in 1995 (see Figure 9-14d). There has been rather little systematic change in binge drinking for either gender since the mid-1990s.

- Between 1980 and 1992, the 30-day prevalence of ***cigarette smoking*** was consistently higher among college females than males, despite decreases for both genders during the first half of the decade and increases for both genders from 1989 to 1993 (Figures 9-15a, 9-15b, and 9-15c). However, the gap in 30-day prevalence narrowed, because use by female college students declined some between 1980 and 1989, while use by male college students did not. After 1989, the gap remained quite small and the genders reversed position, with males catching up to, and passing, females in their rate of smoking by 1994. (A similar reversal had occurred among seniors a few years earlier.) In 2001, another reversal appeared with 27% of college females reporting smoking in the prior 30 days versus 25% of the college males. Both genders have exhibited decreases in smoking since 1999.

  While the rise in smoking among college students was longer-term and more gradual than in the other two groups, it nevertheless was substantial, rising by nearly half between 1989 (21%) and 1999 (31%). Note also that the increase in smoking after 1988 was sharper among college males than among college females, consistent with the notion that Camel cigarettes may have played a role in the overall increase. (Camels are considerably more popular among males.)

TABLE 9-1

Trends in Lifetime Prevalence of Various Types of Drugs Among College Students 1-4 Years Beyond High School

Percentage who used in lifetime

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00-'01 change
Approx. Wtd. N =	*1040*	*1130*	*1150*	*1170*	*1110*	*1080*	*1190*	*1220*	*1310*	*1300*	*1400*	*1410*	*1490*	*1490*	*1410*	*1450*	*1450*	*1480*	*1440*	*1440*	*1350*	*1340*	
Any Illicit Drug[a]	69.4	66.8	64.6	66.9	62.7	65.2	61.8	60.0	58.4	55.6	54.0	50.4	48.8	45.9	45.5	45.5	47.4	49.0	52.9	53.2	53.7	53.6	-0.1
Any Illicit Drug[a] Other than Marijuana	42.2	41.3	39.6	41.7	38.6	40.0	37.5	35.7	33.4	30.5	28.4	25.8	26.1	24.3	22.0	24.5	22.7	24.4	24.8	25.5	25.8	26.3	+0.6
Marijuana	65.0	63.3	60.5	63.1	59.0	60.6	57.9	55.8	54.3	51.3	49.1	46.3	44.1	42.0	42.2	41.7	45.1	46.1	49.9	50.8	51.2	51.0	-0.1
Inhalants[b,c]	10.2	8.8	10.6	11.0	10.4	10.6	11.0	13.2	12.6	15.0	13.9	14.4	14.2	14.8	12.0	13.8	11.4	12.4	12.8	12.4	12.9	9.6	-3.3 s
Hallucinogens[c,d]	15.0	12.0	15.0	12.2	12.9	11.4	11.2	10.9	10.2	10.7	11.2	11.3	12.0	11.8	10.0	13.0	12.6	13.8	15.2	14.8	14.4	14.8	+0.4
LSD	10.3	8.5	11.5	8.8	9.4	7.4	7.7	8.0	7.5	7.8	9.1	9.6	10.6	10.6	9.2	11.5	10.8	11.7	13.1	12.7	11.8	12.2	+0.4
MDMA (Ecstasy)[e]	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.8	3.9	2.0	2.9	2.3	2.1	3.1	4.3	4.6	6.8	8.4	13.1	14.7	+1.6
Cocaine	22.0	21.5	22.4	23.1	21.7	22.9	23.3	20.6	15.8	14.6	11.4	9.4	7.9	6.3	5.0	5.5	5.0	5.6	8.1	8.4	9.1	8.6	-0.5
Crack[f]	NA	NA	NA	NA	NA	NA	NA	3.3	3.4	2.4	1.4	1.5	1.7	1.3	1.0	1.8	1.2	1.4	2.2	2.4	2.5	2.0	-0.5
Heroin	0.9	0.6	0.5	0.3	0.5	0.4	0.4	0.6	0.3	0.7	0.3	0.5	0.5	0.6	0.1	0.6	0.7	0.9	1.7	0.9	1.7	1.2	-0.5
Other Narcotics[g]	8.9	8.3	8.1	8.4	8.9	6.3	8.8	7.6	6.3	7.6	6.8	7.3	7.3	6.2	5.1	7.2	5.7	8.2	8.7	8.7	8.9	11.0	+2.1
Amphetamines[g]	29.5	29.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	—
Amphetamines, Adj.[g,h]	NA	NA	30.1	27.8	27.8	25.4	22.3	19.8	17.7	14.6	13.2	13.0	10.5	10.1	9.2	10.7	9.5	10.6	10.6	11.9	12.3	12.4	+0.1
Crystal meth. (Ice)[i]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.0	1.3	0.6	1.6	1.3	1.0	0.8	1.6	2.2	2.8	1.3	2.3	+1.0
Sedatives[g]	13.7	14.2	14.1	12.2	10.8	9.3	8.0	6.1	4.7	4.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	—
Barbiturates[g]	8.1	7.8	8.2	6.6	6.4	4.9	5.4	3.5	3.6	3.2	3.8	3.5	3.8	3.5	3.2	4.0	4.6	5.2	5.7	6.7	6.9	6.0	-0.9
Methaqualone[g]	10.3	10.4	11.1	9.2	9.0	7.2	5.8	4.1	2.2	2.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	—
Tranquilizers[d,g]	15.2	11.4	11.7	10.8	10.8	9.8	10.7	8.7	8.0	8.0	7.1	6.8	6.9	6.3	4.4	5.4	5.4	6.9	7.7	8.2	8.8	9.7	+0.9
Alcohol[j]	94.3	95.2	95.2	95.0	94.2	95.3	94.9	94.1	94.9	93.7	93.1	93.6	91.8	89.3	88.2	88.5	88.4	87.3	88.5	88.0	86.6	86.1	-0.5
Cigarettes	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	—

Source: The Monitoring the Future Study, the University of Michigan.

NOTES: Level of significance of difference between the two most recent years: s = .05, ss = .01, sss = .001. Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding. 'NA' indicates data not available.

[a] "Any illicit drug" includes use of marijuana, hallucinogens, cocaine, or heroin, or other narcotics, amphetamines, barbiturates, methaqualone (until 1990), or tranquilizers not under a doctor's orders.

[b] This drug was asked about in four of the five questionnaire forms in 1980-1989, in five of the six forms in 1990-1998, and in three of the six forms in 2000-2001. Total N in 2001 (for college students) is 670.

[c] Unadjusted for known underreporting of certain drugs. See text for details.

[d] In 2001, the question text was changed on half the questionnaire forms. For hallucinogens, "psychedelics" was changed to "hallucinogens" and "shrooms" was added to the list of examples. For tranquilizers, "Miltown" was replaced with "Xanax" in the list of examples. These changes are partially responsible for any discontinuity in the 2001 data.

[e] This drug was asked about in two of the five questionnaire forms in 1989, and in two of the six questionnaire forms in 1990-2001. Total N in 2001 (for college students) is 450.

[f] This drug was asked about in two of the five questionnaire forms in 1987-1989, and in all six questionnaire forms in 1990-2001.

[g] Only drug use which was not under a doctor's orders is included here.

[h] Based on the data from the revised question, which attempts to exclude inappropriate reporting of nonprescription amphetamines.

[i] This drug was asked about in two of the six questionnaire forms. Total N in 2000 (for college students) is 450.

[j] In 1993 and 1994, the question text was changed slightly in three of the six questionnaire forms to indicate that a "drink" meant "more than just a few sips." Because this revision resulted in rather little change in reported prevalence in the surveys of high school graduates, the data for all forms combined are used in order to provide the most reliable estimate of change. After 1994, the new question text was used in all six of the questionnaire forms.

TABLE 9-2

Trends in Annual Prevalence of Various Types of Drugs Among College Students 1-4 Years Beyond High School

Percentage who used in past year

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00-'01 change
Approx. Wtd. N =	*1040*	*1130*	*1150*	*1170*	*1110*	*1080*	*1190*	*1220*	*1310*	*1300*	*1400*	*1410*	*1490*	*1490*	*1410*	*1450*	*1450*	*1480*	*1440*	*1440*	*1350*	*1340*	
Any Illicit Drug[a]	56.2	55.0	49.5	49.8	45.1	46.3	45.0	40.1	37.4	36.7	33.3	29.2	30.6	30.6	31.4	33.5	34.2	34.1	37.8	36.9	36.1	37.9	+1.8
Any Illicit Drug[a] Other than Marijuana	32.3	31.7	29.9	29.9	27.2	26.7	25.0	21.3	19.2	16.4	15.2	13.2	13.1	12.5	12.2	15.9	12.8	15.8	14.0	15.4	15.6	16.4	+0.8
Marijuana	51.2	51.3	44.7	45.2	40.7	41.7	40.9	37.0	34.6	33.6	29.4	26.5	27.7	27.9	29.3	31.2	33.1	31.6	35.9	35.2	34.0	35.6	+1.6
Inhalants[b,c]	3.0	2.5	2.5	2.8	2.4	3.1	3.9	3.7	4.1	3.7	3.9	3.5	3.1	3.8	3.0	3.9	3.6	4.1	3.0	3.2	2.9	2.8	-0.2
Hallucinogens[c,d]	8.5	7.0	8.7	6.5	6.2	5.0	6.0	5.9	5.3	5.1	5.4	6.3	6.8	6.0	6.2	8.2	6.9	7.7	7.2	7.8	6.7	7.5	+0.8
LSD	6.0	4.6	6.3	4.3	3.7	2.2	3.9	4.0	3.6	3.4	4.3	5.1	5.7	5.1	5.2	6.9	5.2	5.0	4.4	5.4	4.3	4.0	-0.3
MDMA (Ecstasy)[e]	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.3	2.3	0.9	2.0	0.8	0.5	2.4	2.8	2.4	3.9	5.5	9.1	9.2	+0.2
Cocaine	16.8	16.0	17.2	17.3	16.3	17.3	17.1	13.7	10.0	8.2	5.6	3.6	3.0	2.7	2.0	3.6	2.9	3.4	4.6	4.6	4.8	4.7	0.0
Crack[f]	NA	NA	NA	NA	NA	NA	1.3	2.0	1.4	1.5	0.6	0.5	0.4	0.6	0.5	1.1	0.6	0.4	1.0	0.9	0.9	0.9	0.0
Heroin	0.4	0.2	0.1	*	0.1	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.4	0.3	0.6	0.2	0.5	0.4	-0.2
Other Narcotics[g]	5.1	4.3	3.8	3.8	3.8	2.4	4.0	3.1	3.1	3.2	2.9	2.7	2.7	2.5	2.4	3.8	3.1	4.2	4.2	4.3	4.5	5.7	+1.2
Amphetamines[g]	22.4	22.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	—
Amphetamines, Adj.[g,h]	NA	NA	21.1	17.3	15.7	11.9	10.3	7.2	6.2	4.6	4.5	3.9	3.6	4.2	4.2	5.4	4.2	5.7	5.1	5.8	6.6	7.2	+0.5
Crystal meth. (Ice)[i]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.1	0.1	0.2	0.7	0.8	1.1	0.4	0.8	1.0	0.5	0.5	0.6	+0.1
Sedatives[g]	8.3	8.0	8.0	4.5	3.5	2.5	2.6	1.7	1.5	1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	—
Barbiturates[g]	2.9	2.8	3.2	2.2	1.9	1.3	2.0	1.2	1.1	1.0	1.4	1.2	1.4	1.5	1.2	2.0	2.3	3.0	2.5	3.2	3.7	3.8	+0.2
Methaqualone[g]	7.2	6.5	6.6	3.1	2.5	1.4	1.2	0.8	0.5	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	—
Tranquilizers[d,g]	6.9	4.8	4.7	4.6	3.5	3.6	4.4	3.8	3.1	2.6	3.0	2.4	2.9	2.4	1.8	2.9	2.8	3.8	3.9	3.8	4.2	5.1	+0.9
Alcohol[j]	90.5	92.5	92.2	91.6	90.0	92.0	91.5	90.9	89.6	89.6	89.0	88.3	86.9	85.1	82.7	83.2	83.0	82.4	84.6	83.6	83.2	83.0	-0.2
Cigarettes	36.2	37.6	34.3	36.1	33.2	35.0	35.3	38.0	36.6	34.2	35.5	35.6	37.3	38.8	37.6	39.3	41.4	43.6	44.3	44.5	41.3	39.0	-2.3

Source: The Monitoring the Future Study, the University of Michigan.

NOTES: Level of significance of difference between the two most recent years: s = .05, ss = .01, sss = .001. Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding. 'NA' indicates data not available.

[a] "Any illicit drug" includes use of marijuana, hallucinogens, cocaine, or heroin, or other narcotics, amphetamines, barbiturates, methaqualone (until 1990), or tranquilizers not under a doctor's orders.

[b] This drug was asked about in four of the five questionnaire forms in 1980-1989, in five of the six forms in 1990-1998, and in three of the six forms in 2000-2001. Total N in 2001 (for college students) is 670.

[c] Unadjusted for known underreporting of certain drugs. See text for details.

[d] In 2001, the question text was changed on half the questionnaire forms. For hallucinogens, "psychedelics" was changed to 'hallucinogens' and "shrooms" was added to the list of examples. For tranquilizers, "Miltown" was replaced with "Xanax" in the list of examples. These changes are partially responsible for any discontinuity in the 2001 data.

[e] This drug was asked about in two of the five questionnaire forms in 1989, and in two of the six questionnaire forms in 1990-2001. Total N in 2001 (for college students) is 450.

[f] This drug was asked about in two of the five questionnaire forms in 1987-1989, and in all six questionnaire forms in 1990-2001.

[g] Only drug use which was not under a doctor's orders is included here.

[h] Based on the data from the revised question, which attempts to exclude inappropriate reporting of nonprescription amphetamines.

[i] This drug was asked about in two of the six questionnaire forms. Total N in 2000 (for college students) is 450.

[j] In 1993 and 1994, the question text was changed slightly in three of the six questionnaire forms to indicate that a "drink" meant "more than just a few sips." Because this revision resulted in rather little change in reported prevalence in the surveys of high school graduates, the data for all forms combined are used in order to provide the most reliable estimate of change. After 1994, the new question text was used in all six of the questionnaire forms.

TABLE 9-3

Trends in Thirty-Day Prevalence of Various Types of Drugs Among College Students 1-4 Years Beyond High School

Percentage who used in last thirty days

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00-'01 change
Approx. Wtd. N =	*1040*	*1130*	*1150*	*1170*	*1110*	*1080*	*1190*	*1220*	*1310*	*1300*	*1400*	*1410*	*1490*	*1490*	*1410*	*1450*	*1450*	*1480*	*1440*	*1440*	*1350*	*1340*	
Any Illicit Drug[a]	38.4	37.6	31.3	29.3	27.0	26.1	25.9	22.4	18.5	18.2	15.2	15.2	16.1	15.1	16.0	19.1	17.6	19.2	19.7	21.6	21.5	21.9	+0.4
Any Illicit Drug[a] Other than Marijuana	20.7	18.6	17.1	13.9	13.8	11.8	11.6	8.8	8.5	6.9	4.4	4.3	4.6	5.4	4.6	6.3	4.5	6.8	6.1	6.4	6.9	7.5	+0.5
Marijuana	34.0	33.2	26.8	26.2	23.0	23.6	22.3	20.3	16.8	16.3	14.0	14.1	14.6	14.2	15.1	18.6	17.5	17.7	18.6	20.7	20.0	20.2	+0.1
Inhalants[b,c]	1.5	0.9	0.8	0.7	0.7	1.0	1.1	0.9	1.3	0.8	1.0	0.9	1.1	1.3	0.6	1.6	0.8	0.7	0.6	1.5	0.9	0.4	-0.5
Hallucinogens[c,d]	2.7	2.3	2.6	1.8	1.8	1.3	2.2	2.0	1.7	2.3	1.4	1.2	2.3	2.5	2.1	3.3	1.9	2.1	2.1	2.0	1.4	1.8	+0.4
LSD	1.4	1.4	1.7	0.9	0.8	0.7	1.4	1.4	1.1	1.4	1.1	0.8	1.8	1.6	1.8	2.5	0.9	1.1	1.5	1.2	0.9	1.0	+0.1
MDMA (Ecstasy)[e]	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.3	0.6	0.2	0.4	0.3	0.2	0.7	0.7	0.8	0.8	2.1	2.5	1.5	-0.9
Cocaine	6.9	7.3	7.9	6.5	7.6	6.9	7.0	4.6	4.2	2.8	1.2	1.0	1.0	0.7	0.6	0.7	0.8	1.6	1.6	1.2	1.4	1.9	+0.5
Crack[f]	NA	NA	NA	NA	NA	NA	NA	0.4	0.5	0.2	0.1	0.3	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.1	-0.2
Heroin	0.3	0.0	0.0	0.0	*	*	0.0	0.1	0.1	0.1	0.0	0.1	0.0	*	0.0	0.1	*	0.2	0.1	0.1	0.2	0.1	-0.1
Other Narcotics[g]	1.8	1.1	0.9	1.1	1.4	0.7	0.6	0.8	0.8	0.7	0.5	0.6	1.0	0.7	0.4	1.2	0.7	1.3	1.1	1.0	1.7	1.7	0.0
Amphetamines[g]	13.4	12.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	—
Amphetamines, Adj.[g,h]	NA	NA	9.9	7.0	5.5	4.2	3.7	2.3	1.8	1.3	1.4	1.0	1.1	1.5	1.5	2.2	0.9	2.1	1.7	2.3	2.9	3.3	+0.4
Crystal meth. (Ice)[i]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0	0.0	0.0	0.3	0.5	0.3	0.1	0.2	0.3	0.0	0.0	0.1	+0.1
Sedatives[g]	3.8	3.4	2.5	1.1	1.0	0.7	0.6	0.6	0.6	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	—
Barbiturates[g]	0.9	0.8	1.0	0.5	0.7	0.4	0.6	0.5	0.5	0.2	0.2	0.3	0.7	0.4	0.4	0.5	0.8	1.2	1.1	1.1	1.1	1.5	+0.4
Methaqualone[g]	3.1	3.0	1.9	0.7	0.5	0.3	0.1	0.2	0.1	0.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	—
Tranquilizers[d,g]	2.0	1.4	1.4	1.2	1.1	1.4	1.9	1.0	1.1	0.8	0.5	0.6	0.6	0.4	0.4	0.5	0.7	1.2	1.3	1.1	2.0	1.5	-0.5
Alcohol[j]	81.8	81.9	82.8	80.3	79.1	80.3	79.7	78.4	77.0	76.2	74.5	74.7	71.4	70.1	67.8	67.5	67.0	65.8	68.1	69.6	67.4	67.0	-0.4
Cigarettes	25.8	25.9	24.4	24.7	21.5	22.4	22.4	24.0	22.6	21.1	21.5	23.2	23.5	24.5	23.5	26.8	27.9	28.3	30.0	30.6	28.2	25.7	-2.4

Source: The Monitoring the Future Study, the University of Michigan

NOTES: Level of significance of difference between the two most recent years: s = .05, ss = .01, sss = .001. Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding. 'NA' indicates data not available.

[a] "Any illicit drug" includes use of marijuana, hallucinogens, cocaine, or heroin, or other narcotics, amphetamines, barbiturates, methaqualone (until 1990), or tranquilizers not under a doctor's orders.

[b] This drug was asked about in four of the five questionnaire forms in 1980-1989, in five of the six forms in 1990-1998, and in three of the six forms in 2000-2001. Total N in 2001 (for college students) is 670.

[c] Unadjusted for known underreporting of certain drugs. See text for details.

[d] In 2001, the question text was changed on half the questionnaire forms. For hallucinogens, "psychedelics" was changed to "hallucinogens" and "shrooms" was added to the list of examples. For tranquilizers, "Miltown" was replaced with "Xanax" in the list of examples. These changes are partially responsible for any discontinuity in the 2001 data.

[e] This drug was asked about in two of the five questionnaire forms in 1989, and in two of the six questionnaire forms in 1990-2001. Total N in 2001 (for college students) is 450.

[f] This drug was asked about in two of the five questionnaire forms in 1987-1989, and in all six questionnaire forms in 1990-2001.

[g] Only drug use which was not under a doctor's orders is included here.

[h] Based on the data from the revised question, which attempts to exclude inappropriate reporting of nonprescription amphetamines.

[i] This drug was asked about in two of the six questionnaire forms. Total N in 2000 (for college students) is 450.

[j] In 1993 and 1994, the question text was changed slightly in three of the six questionnaire forms to indicate that a "drink" meant "more than just a few sips." Because this revision resulted in rather little change in reported prevalence in the surveys of high school graduates, the data for all forms combined are used in order to provide the most reliable estimate of change. After 1994, the new question text was used in all six of the questionnaire forms.

BEST COPY AVAILABLE

TABLE 9-4

Trends in Thirty-Day Prevalence of Daily Use of Various Types of Drugs Among College Students 1-4 Years Beyond High School

Percentage who used daily in last thirty days

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00-'01 change
Approx. Wtd. N =	*1040*	*1130*	*1150*	*1170*	*1110*	*1080*	*1190*	*1220*	*1310*	*1300*	*1400*	*1410*	*1490*	*1490*	*1410*	*1450*	*1450*	*1480*	*1440*	*1440*	*1350*	*1340*	
Marijuana	7.2	5.6	4.2	3.8	3.6	3.1	2.1	2.3	1.8	2.6	1.7	1.8	1.6	1.9	1.8	3.7	2.8	3.7	4.0	4.0	4.6	4.5	0.0
Cocaine	0.2	0.0	0.3	0.1	0.4	0.1	0.1	0.1	0.1	*	0.0	*	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Amphetamines[a]	0.5	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	—
Amphetamines, Adj.[a,b]	NA	NA	0.3	0.2	0.2	*	0.1	0.1	*	*	0.0	0.1	0.0	0.1	0.1	0.1	*	0.2	0.1	0.1	0.1	0.2	+0.1
Alcohol[c]																							
Daily	6.5	5.5	6.1	6.1	6.6	5.0	4.6	6.0	4.9	4.0	3.8	4.1	3.7	3.9	3.7	3.0	3.2	4.5	3.9	4.5	3.6	4.7	+1.0
5+ Drinks in a row in last 2 weeks	43.9	43.6	44.0	43.1	45.4	44.6	45.0	42.8	43.2	41.7	41.0	42.8	41.4	40.2	40.2	38.6	38.3	40.7	38.9	40.0	39.3	40.9	+1.6
Cigarettes																							
Daily	18.3	17.1	16.2	15.3	14.7	14.2	12.7	13.9	12.4	12.2	12.1	13.8	14.1	15.2	13.2	15.8	15.9	15.2	18.0	19.3	17.8	15.0	-2.8 s
Half-pack or more per day	12.7	11.9	10.5	9.6	10.2	9.4	8.3	8.2	7.3	6.7	8.2	8.0	8.9	8.9	8.0	10.2	8.5	9.1	11.3	11.0	10.1	7.8	-2.4 s

Source: The Monitoring the Future Study, the University of Michigan.

NOTES: Level of significance of difference between the two most recent years: s = .05, ss = .01, sss = .001. Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding. '*' indicates a percentage of less than 0.05% but greater than true zero. 'NA' indicates data not available.

[a] Only drug use which was not under a doctor's orders is included here.

[b] Based on the data from the revised question, which attempts to exclude inappropriate reporting of nonprescription amphetamines.

[c] In 1993 and 1994, the question text was changed slightly in three of the six questionnaire forms to indicate that a "drink" meant "more than just a few sips." Because this revision resulted in rather little change in reported prevalence in the surveys of high school graduates, the data for all forms combined are used in order to provide the most reliable estimate of change. After 1994, the new question text was used in all six of the questionnaire forms.

TABLE 9-5

Trends in Lifetime, Annual, and Thirty-Day Prevalence of an Illicit Drug Use Index[a] Among College Students 1-4 Years Beyond High School, by Gender

	1980[b]	1981[b]	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00-'01 change
	Percentage reporting use in lifetime																						
Any Illicit Drug	*69.4*	*66.8*	64.6	66.9	62.7	65.2	61.8	60.0	58.4	55.6	54.0	50.4	48.8	45.9	45.5	45.5	47.4	49.0	52.9	53.2	53.7	53.6	-0.1
Males	*71.0*	*67.5*	68.1	71.3	66.4	69.8	64.7	63.5	56.0	56.5	52.5	51.3	50.8	45.7	49.5	47.3	50.3	52.1	54.4	58.4	54.4	53.9	-0.5
Females	*67.5*	*66.3*	61.5	63.0	59.2	61.6	59.4	57.4	60.2	54.9	55.1	49.7	47.1	46.0	42.6	44.3	45.6	46.7	52.0	49.6	53.2	53.5	+0.2
Any Illicit Drug Other than Marijuana	*42.2*	*41.3*	39.6	41.7	38.6	40.0	37.5	35.7	33.4	30.5	28.4	25.8	26.1	24.3	22.0	24.5	22.7	24.4	24.8	25.5	25.8	26.3	+0.6
Males	*42.8*	*39.8*	45.1	44.6	40.9	42.1	38.2	37.2	31.8	30.6	26.2	27.6	26.3	24.3	24.6	26.6	25.0	27.3	27.3	29.4	28.9	27.0	-1.9
Females	*41.6*	*42.6*	34.7	39.2	36.4	38.3	37.0	34.6	34.6	30.4	30.1	24.3	26.1	24.3	20.1	22.9	21.2	22.2	23.3	22.8	23.5	25.9	+2.3
	Percentage reporting use in last twelve months																						
Any Illicit Drug	*56.2*	*55.0*	49.5	49.8	45.1	46.3	45.0	40.1	37.4	36.7	33.3	29.2	30.6	30.6	31.4	33.5	34.2	34.1	37.8	36.9	36.1	37.9	+1.8
Males	*58.9*	*56.2*	54.6	53.4	48.4	50.9	49.8	43.3	37.0	38.2	34.2	30.2	32.8	32.6	33.9	36.1	36.6	38.3	40.1	42.5	38.0	38.8	+0.8
Females	*53.3*	*54.0*	44.9	46.7	41.9	42.7	41.1	37.7	37.6	35.4	32.5	28.4	28.7	29.1	29.5	31.7	32.7	31.1	36.4	33.2	34.7	37.3	+2.6
Any Illicit Drug Other than Marijuana	*32.3*	*31.7*	29.9	29.9	27.2	26.7	25.0	21.3	19.2	16.4	15.2	13.2	13.1	12.5	12.2	15.9	12.8	15.8	14.0	15.4	15.6	16.4	+0.8
Males	*33.7*	*32.8*	33.4	33.5	29.2	29.7	28.6	23.5	19.4	18.7	15.7	14.4	13.8	15.0	14.9	19.5	15.1	18.1	17.0	19.0	18.6	17.2	-1.4
Females	*31.1*	*30.8*	26.9	26.8	25.2	24.4	22.1	19.6	19.0	14.6	14.8	12.1	12.6	10.5	10.2	13.3	11.3	14.1	12.1	12.8	13.5	15.8	+2.3
	Percentage reporting use in last thirty days																						
Any Illicit Drug	*38.4*	*37.6*	31.3	29.3	27.0	26.1	25.9	22.4	18.5	18.2	15.2	15.2	16.1	15.1	16.0	19.1	17.6	19.2	19.7	21.6	21.5	21.9	+0.4
Males	*42.9*	*40.6*	37.7	33.8	30.4	29.9	31.0	24.0	18.8	20.0	18.2	16.0	18.0	16.0	20.5	23.7	20.6	23.4	23.1	26.7	24.0	25.0	+1.0
Females	*34.0*	*34.8*	25.6	25.5	23.7	23.2	21.7	21.1	18.3	16.7	12.7	14.6	14.5	14.5	12.7	15.7	15.8	16.2	17.6	18.1	19.6	19.8	+0.1
Any Illicit Drug Other than Marijuana	*20.7*	*18.6*	17.1	13.9	13.8	11.8	11.6	8.8	8.5	6.9	4.4	4.3	4.6	5.4	4.6	6.3	4.5	6.8	6.1	6.4	6.9	7.5	+0.5
Males	*22.8*	*18.6*	20.2	16.0	16.1	12.6	14.4	9.0	8.2	8.0	4.9	4.8	5.1	7.3	6.2	8.8	6.1	7.8	8.6	7.5	8.2	9.0	+0.8
Females	*18.7*	*18.5*	14.2	12.1	11.5	11.2	9.3	8.5	8.8	6.0	4.0	3.9	4.2	3.8	3.4	4.5	3.4	6.1	4.6	5.6	6.0	6.4	+0.4
	Approximate Weighted N																						
All Respondents	*1040*	*1130*	*1150*	*1170*	*1110*	*1080*	*1190*	*1220*	*1310*	*1300*	*1400*	*1410*	*1490*	*1490*	*1410*	*1450*	*1450*	*1480*	*1440*	*1440*	*1350*	*1340*	
Males	*520*	*530*	*550*	*550*	*540*	*490*	*540*	*520*	*560*	*580*	*620*	*640*	*680*	*660*	*590*	*610*	*560*	*630*	*570*	*590*	*560*	*540*	
Females	*520*	*600*	*610*	*620*	*570*	*600*	*650*	*700*	*750*	*720*	*780*	*770*	*810*	*830*	*820*	*840*	*890*	*860*	*880*	*850*	*790*	*800*	

Source: The Monitoring the Future Study, the University of Michigan.

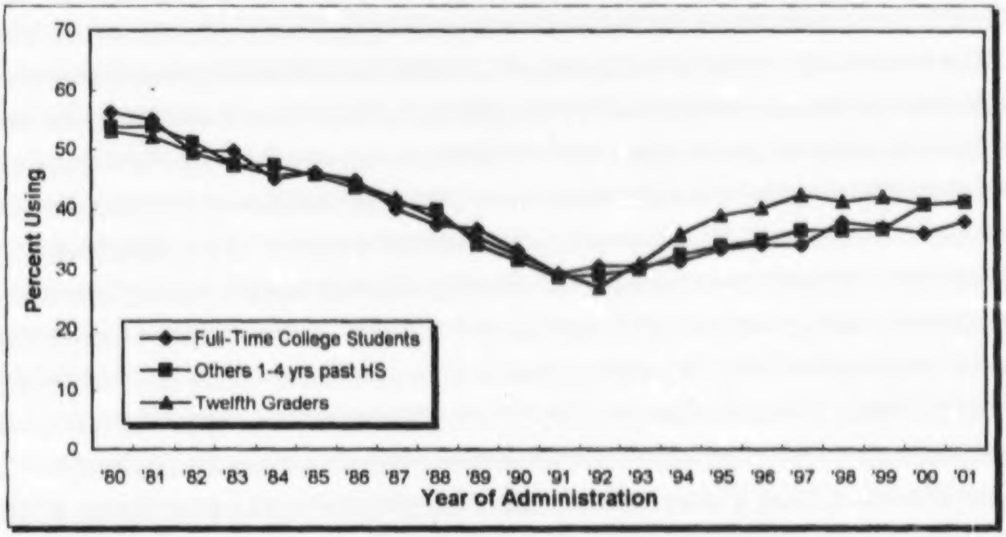
NOTES: Level of significance of difference between the two most recent years: s = .05, ss = .01, sss = .001. Any apparent inconsistency between the change and prevalence estimates for the two most recent years is due to rounding.

[a] Use of "any illicit drug" includes any use of marijuana, hallucinogens, cocaine, or heroin, or any use of other narcotics, amphetamines, barbiturates, methaqualone (until 1990), or tranquilizers not under a doctor's orders.

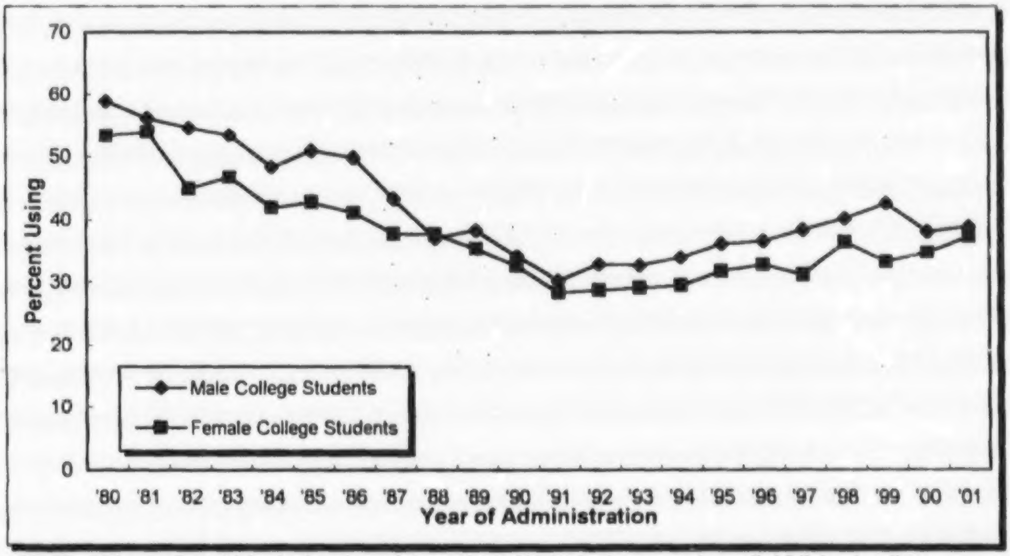
[b] Revised questions about amphetamine use were introduced in 1982 to exclude more completely inappropriate reporting of nonprescription amphetamines. The data in italics are therefore not strictly comparable to the other data.

FIGURE 9-1

Any Illicit Drug: Trends in Annual Prevalence
Among College Students vs. Others
1-4 Years Beyond High School



Any Illicit Drug: Trends in Annual Prevalence
Among Male vs. Female College Students

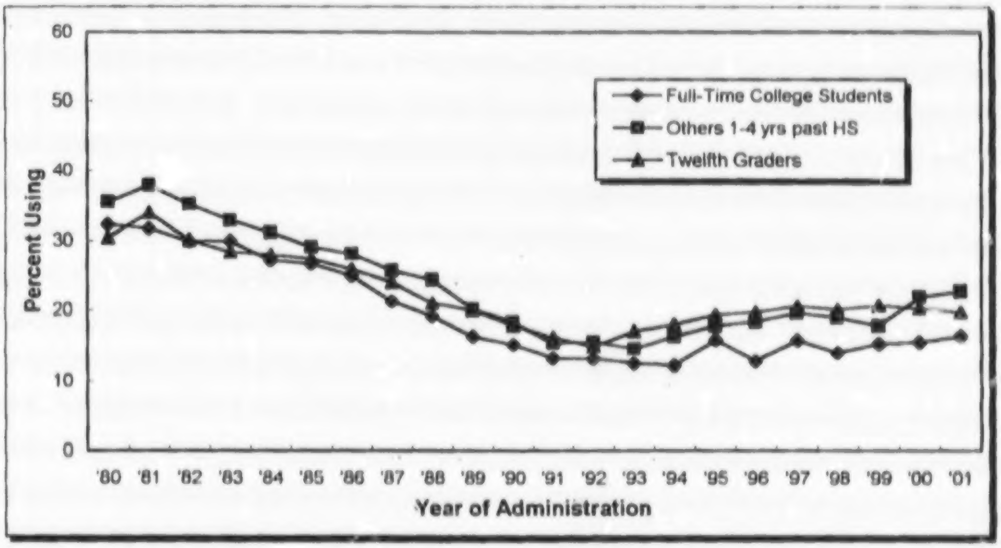


NOTE: "Others" refers to high school graduates 1-4 years beyond high school not currently enrolled full-time in college.

FIGURE 9-2

Any Illicit Drug Other than Marijuana: Trends in Annual Prevalence Among College Students vs. Others

1-4 Years Beyond High School



Any Illicit Drug Other than Marijuana: Trends in Annual Prevalence Among Male vs. Female College Students

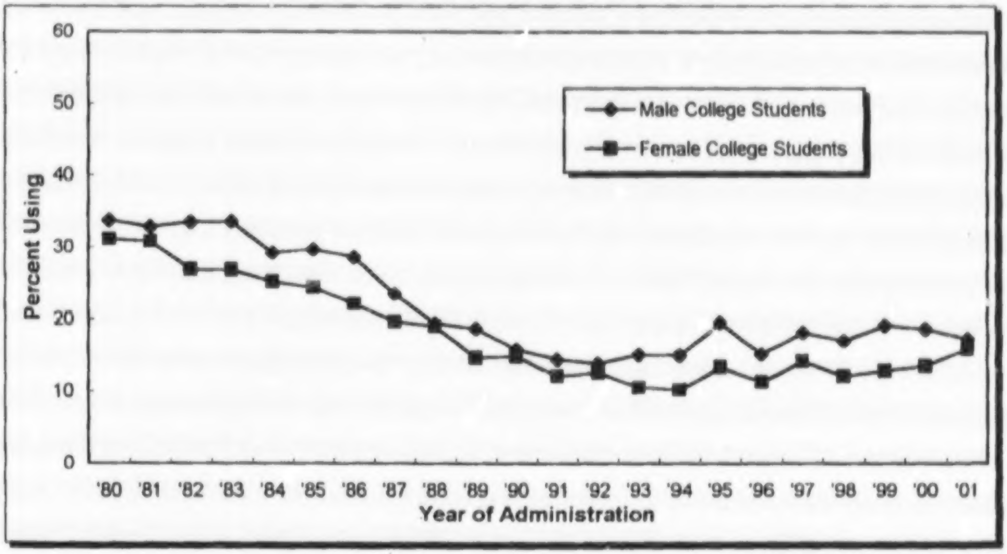
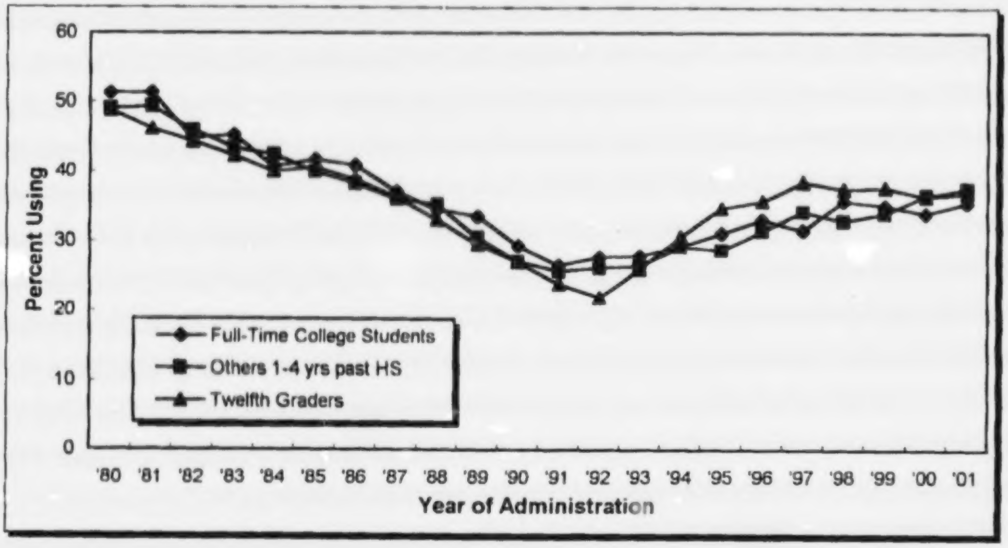


FIGURE 9-3a

Marijuana: Trends in Annual Prevalence Among College Students vs. Others
1-4 Years Beyond High School



Marijuana: Trends in Annual Prevalence Among Male vs. Female College Students

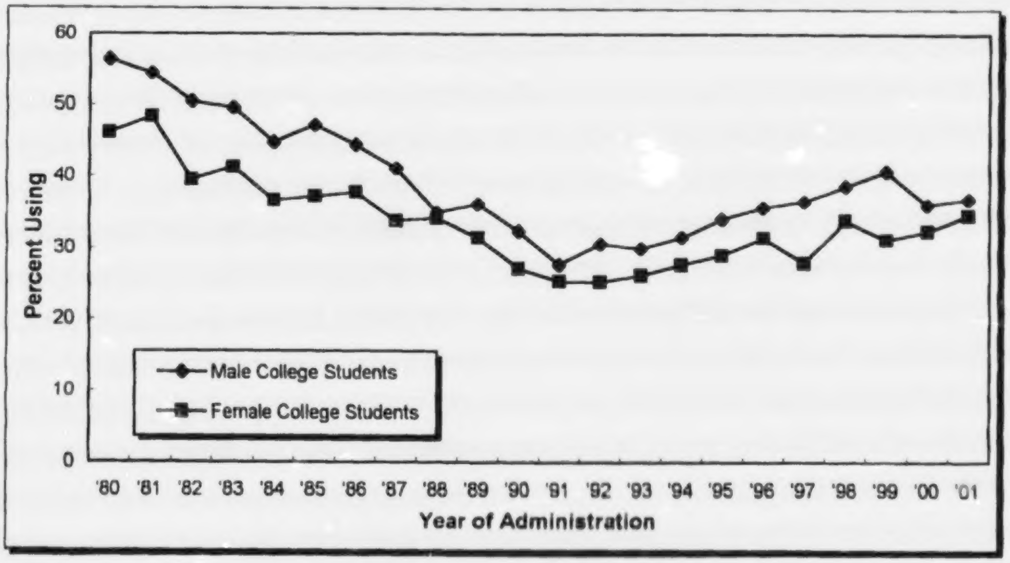
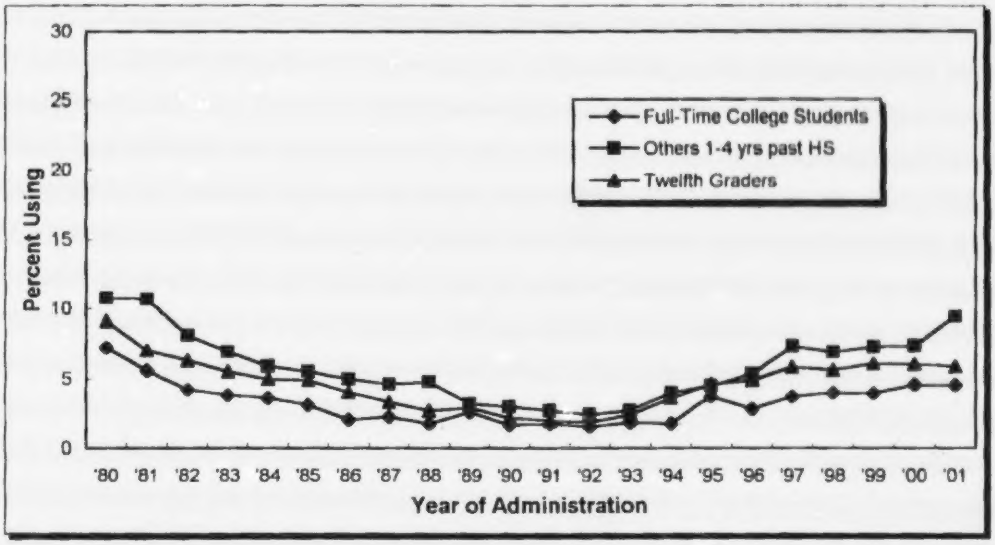


FIGURE 9-3b

Marijuana: Trends in Thirty-Day Prevalence of Daily Use Among College Students vs. Others
1-4 Years Beyond High School



Marijuana: Trends in Thirty-Day Prevalence of Daily Use Among Male vs. Female College Students

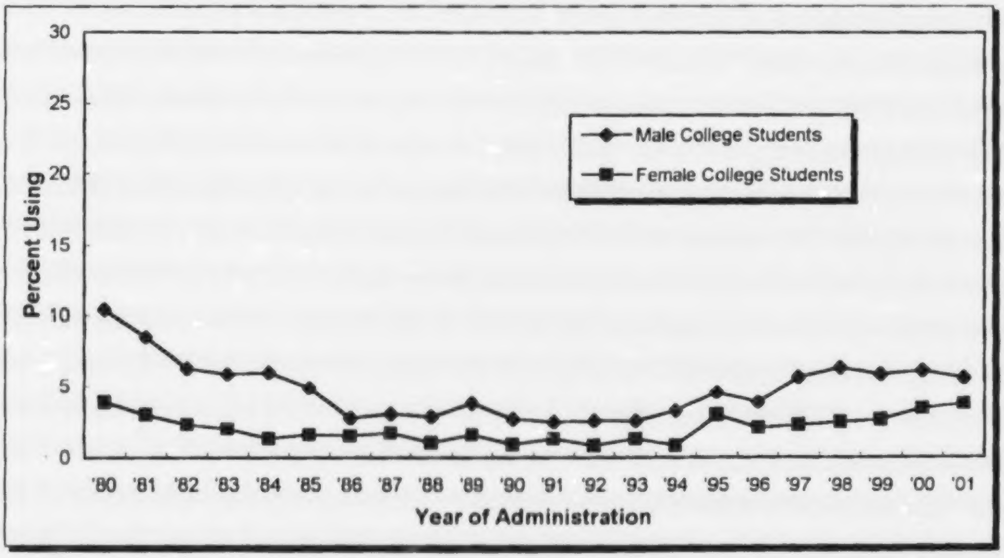
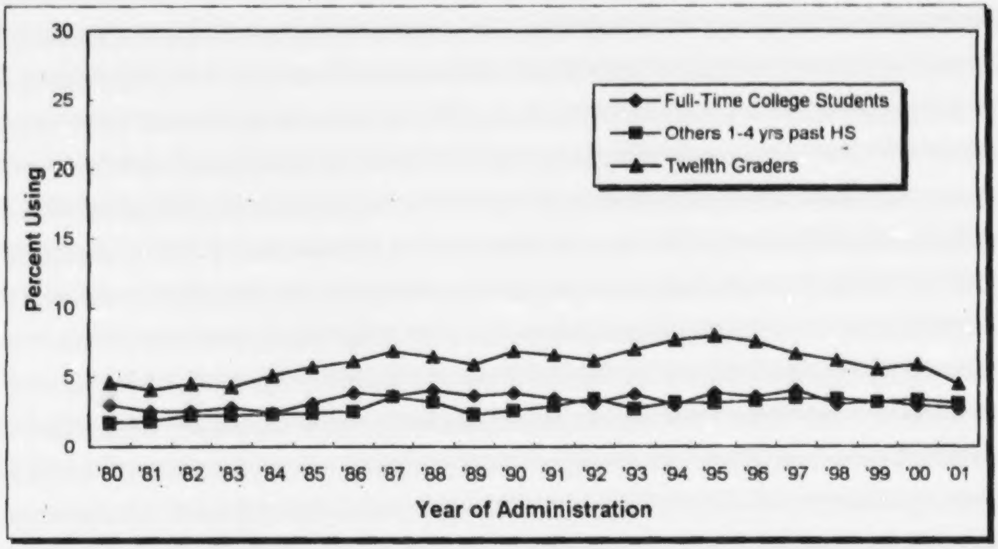


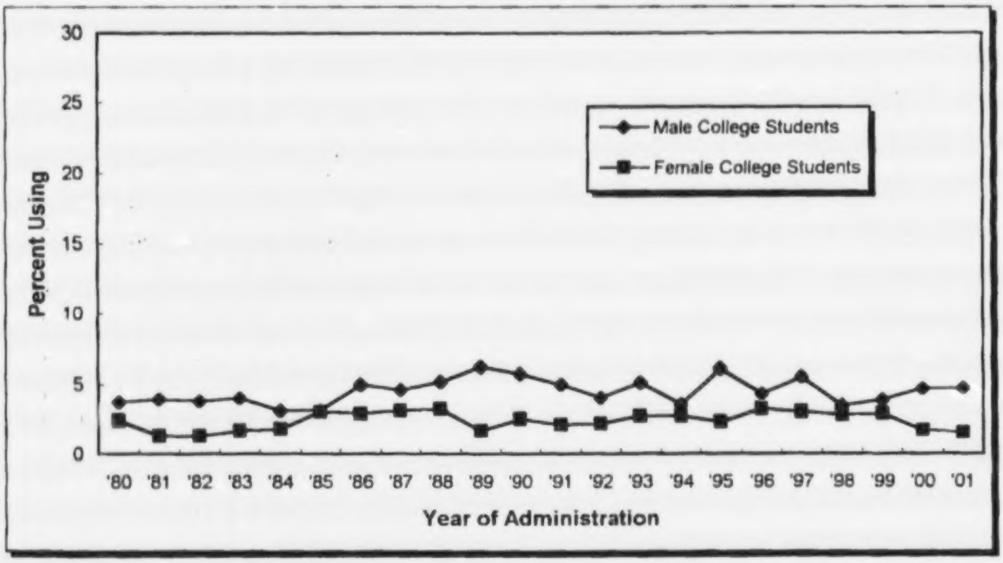
FIGURE 9-4

Inhalants*: Trends in Annual Prevalence Among College Students vs. Others

1-4 Years Beyond High School



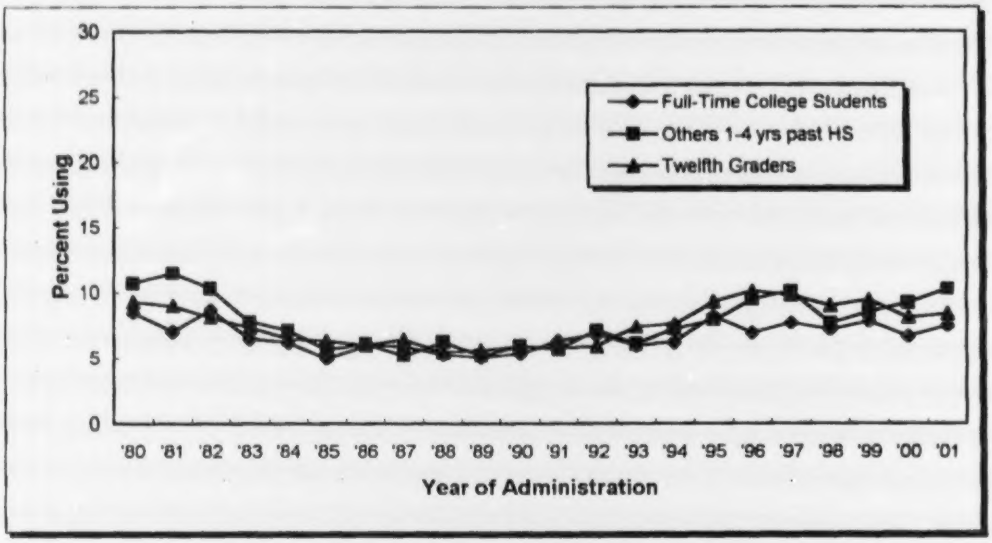
Inhalants*: Trends in Annual Prevalence Among Male vs. Female College Students



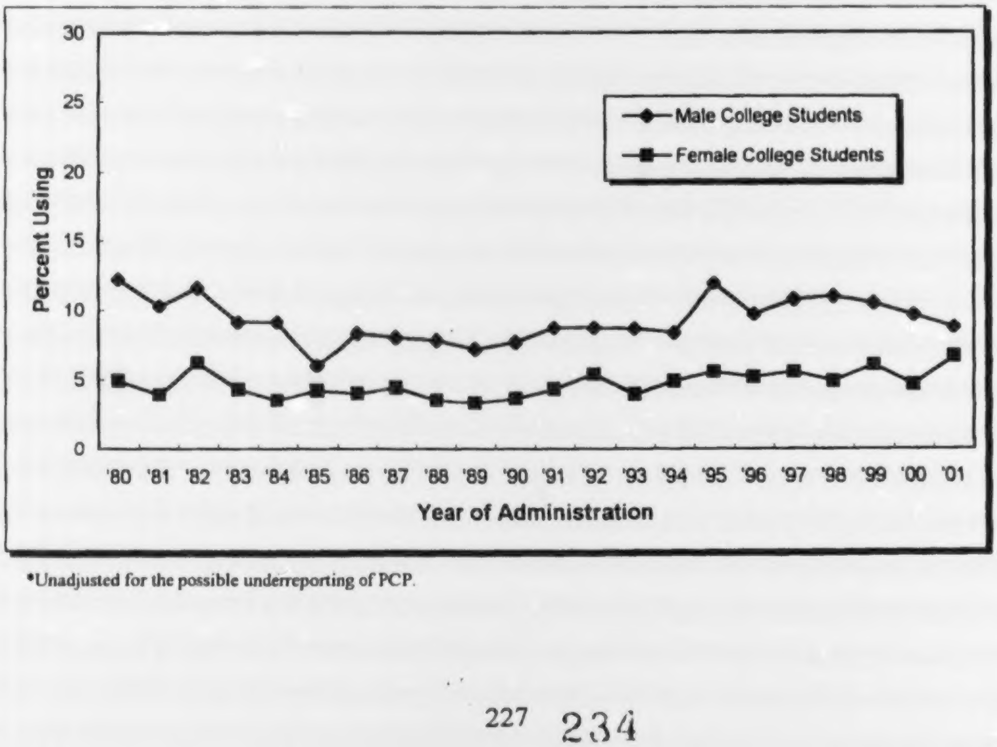
*Unadjusted for the possible underreporting of amyl and butyl nitrites.

FIGURE 9-5

Hallucinogens*: Trends in Annual Prevalence
Among College Students vs. Others
1-4 Years Beyond High School



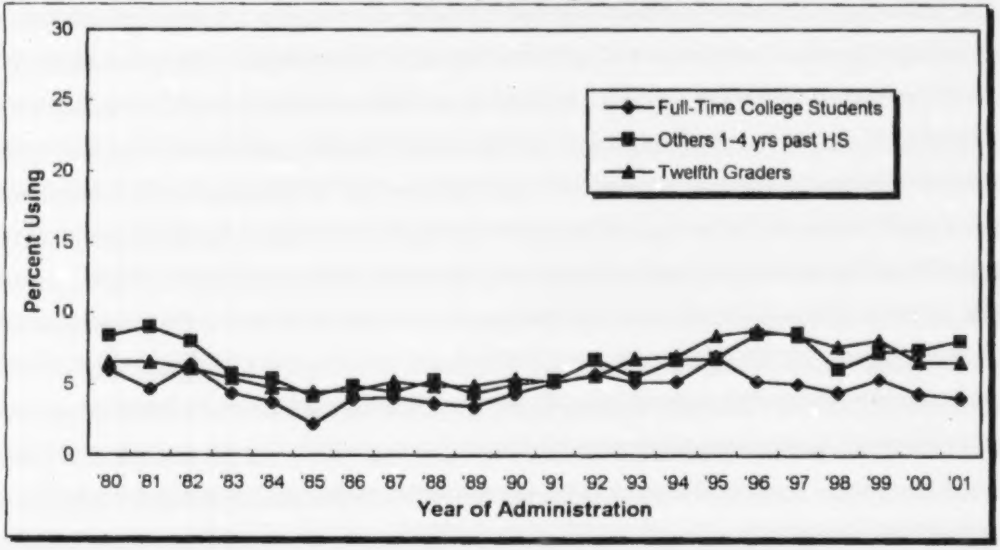
Hallucinogens*: Trends in Annual Prevalence
Among Male vs. Female College Students



*Unadjusted for the possible underreporting of PCP.

FIGURE 9-6

LSD: Trends in Annual Prevalence
Among College Students vs. Others
1-4 Years Beyond High School



LSD: Trends in Annual Prevalence
Among Male vs. Female College Students

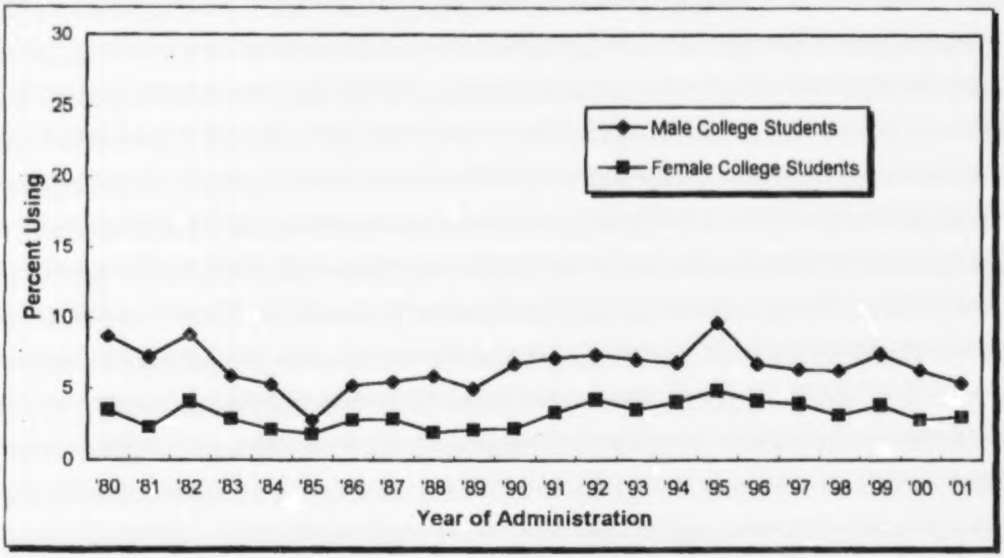
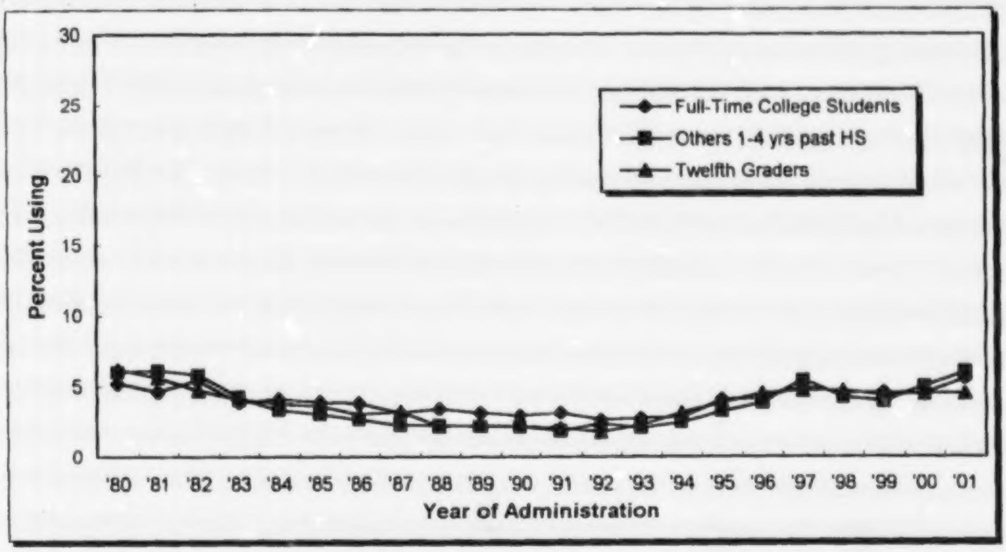


FIGURE 9-7

Hallucinogens Other than LSD: Trends in Annual Prevalence Among College Students vs. Others
1-4 Years Beyond High School



Hallucinogens Other than LSD: Trends in Annual Prevalence Among Male vs. Female College Students

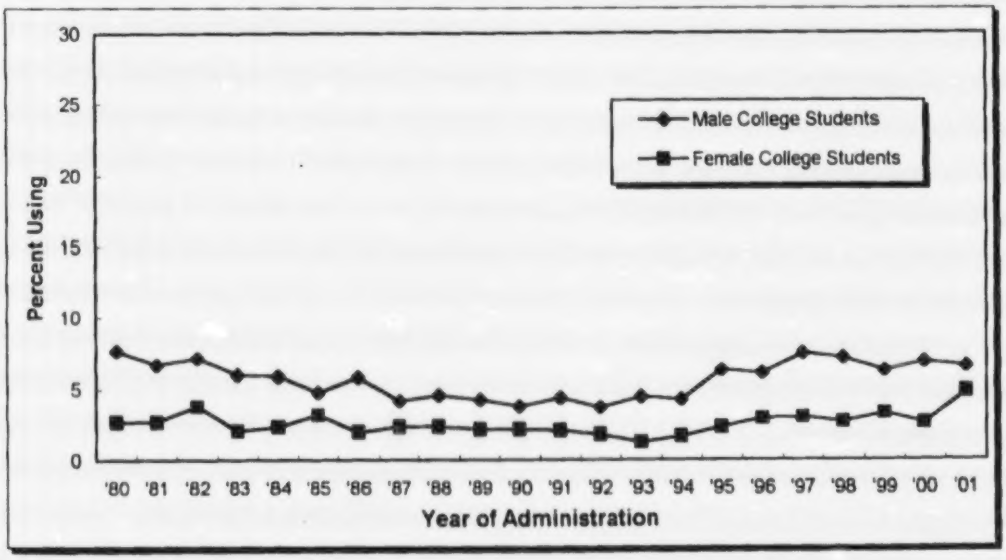
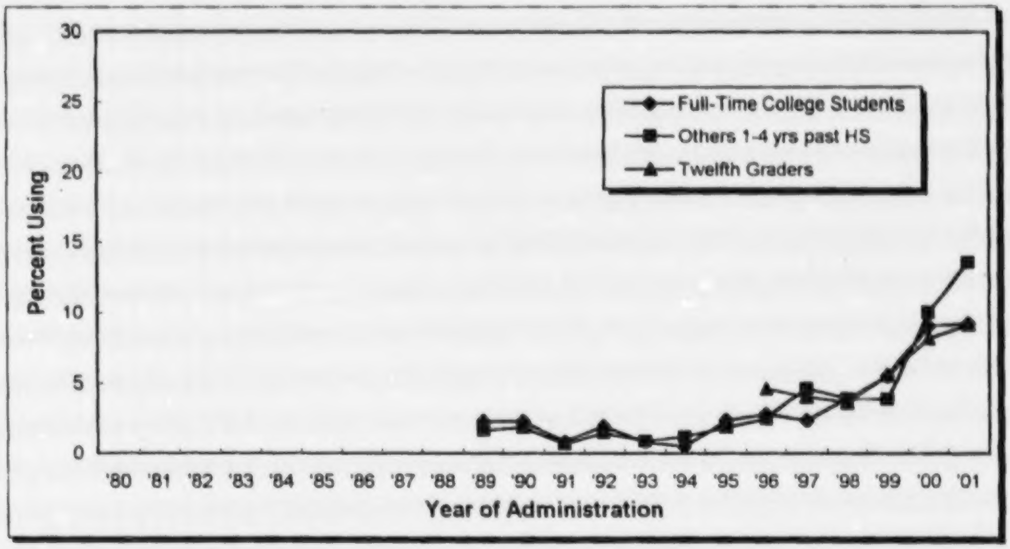


FIGURE 9-8

MDMA (Ecstasy): Trends in Annual Prevalence Among College Students vs. Others

1-4 Years Beyond High School



MDMA (Ecstasy): Trends in Annual Prevalence Among Male vs. Female College Students

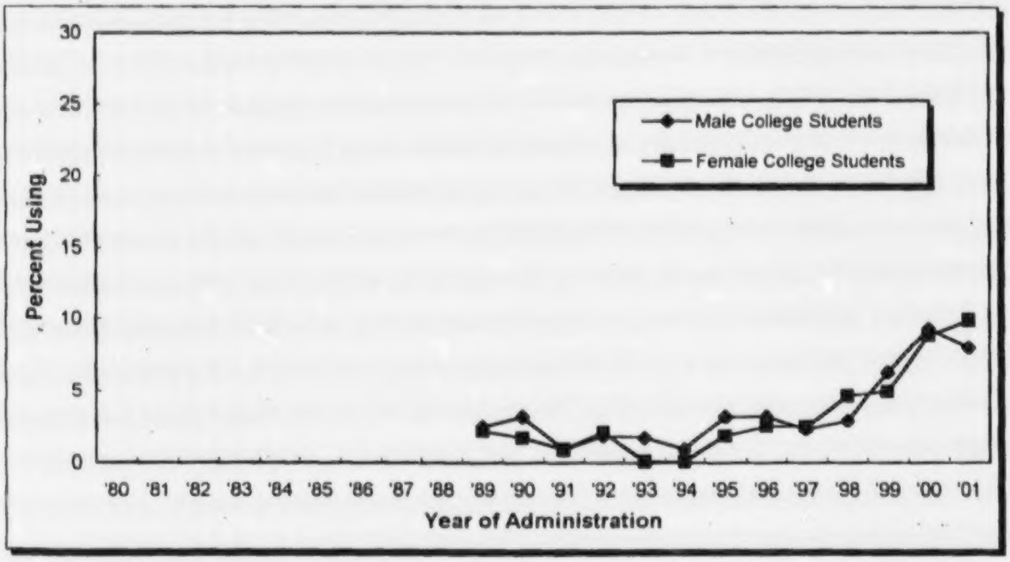
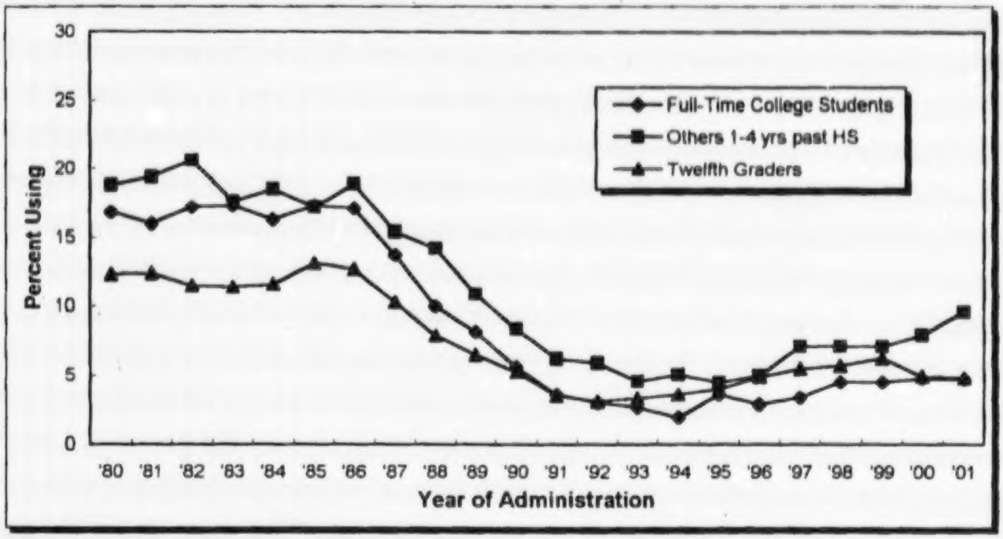


FIGURE 9-9

Cocaine: Trends in Annual Prevalence Among College Students vs. Others

1-4 Years Beyond High School



Cocaine: Trends in Annual Prevalence Among Male vs. Female College Students

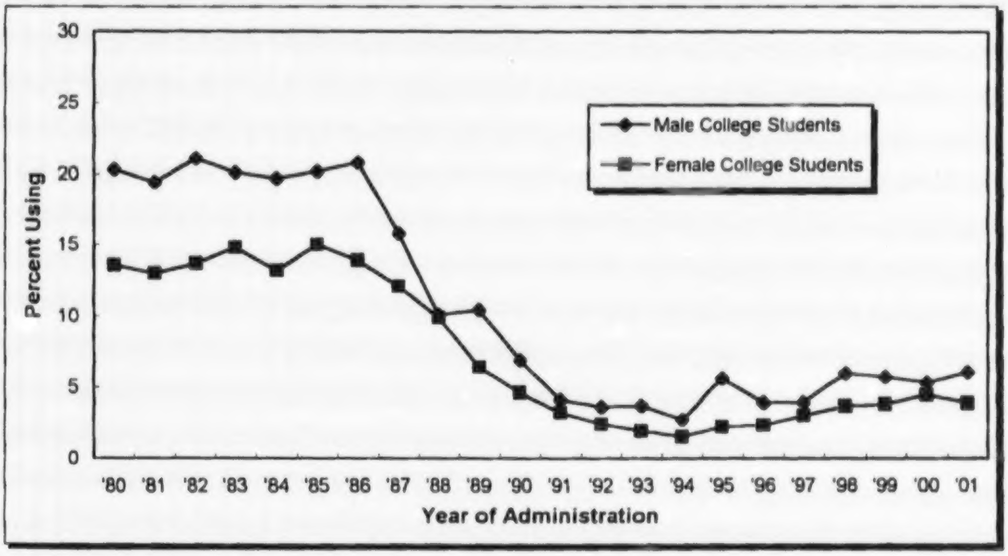
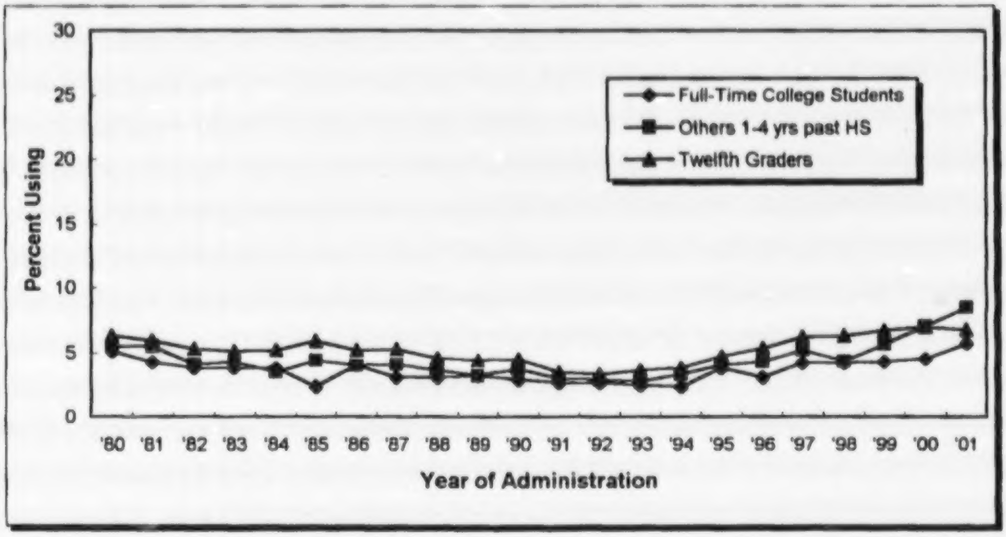


FIGURE 9-10

Narcotics Other than Heroin: Trends in Annual Prevalence Among College Students vs. Others
1-4 Years Beyond High School



Narcotics Other Than Heroin: Trends in Annual Prevalence Among Male vs. Female College Students

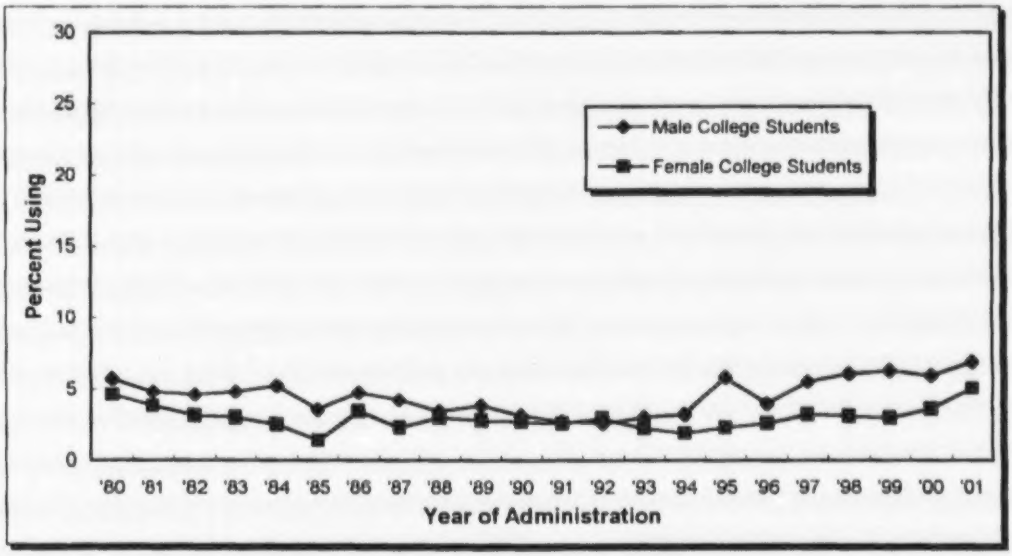
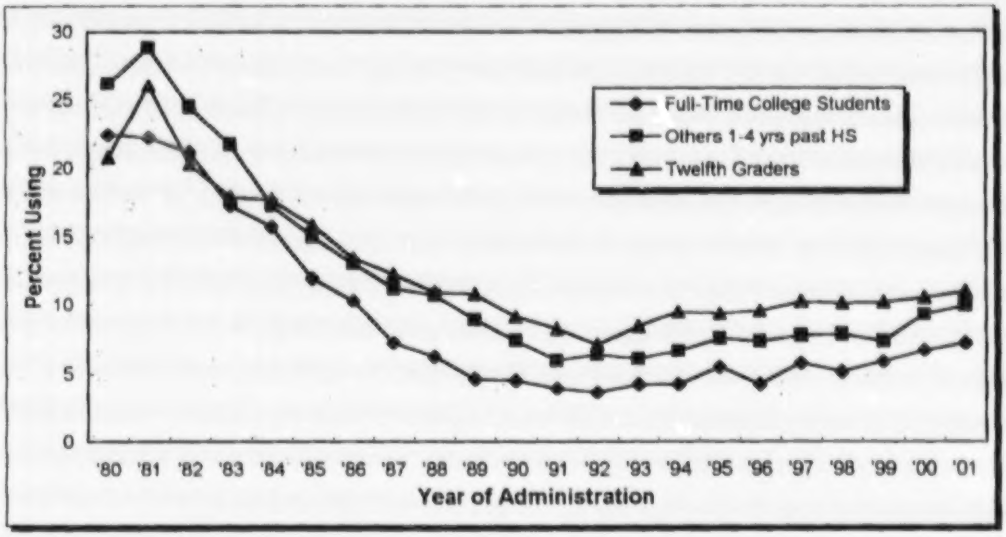


FIGURE 9-11

Amphetamines: Trends in Annual Prevalence
Among College Students vs. Others
1-4 Years Beyond High School



Amphetamines: Trends in Annual Prevalence
Among Male vs. Female College Students

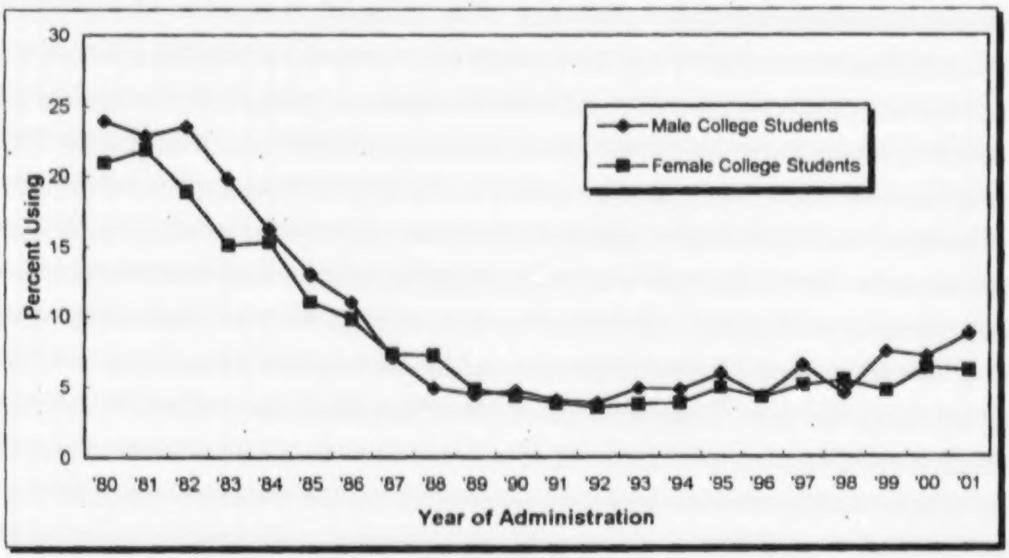
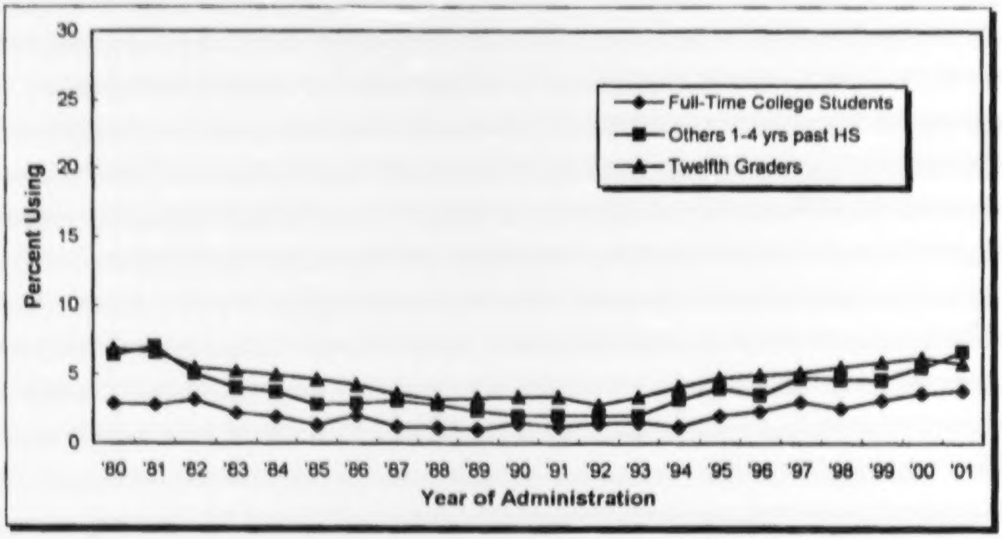
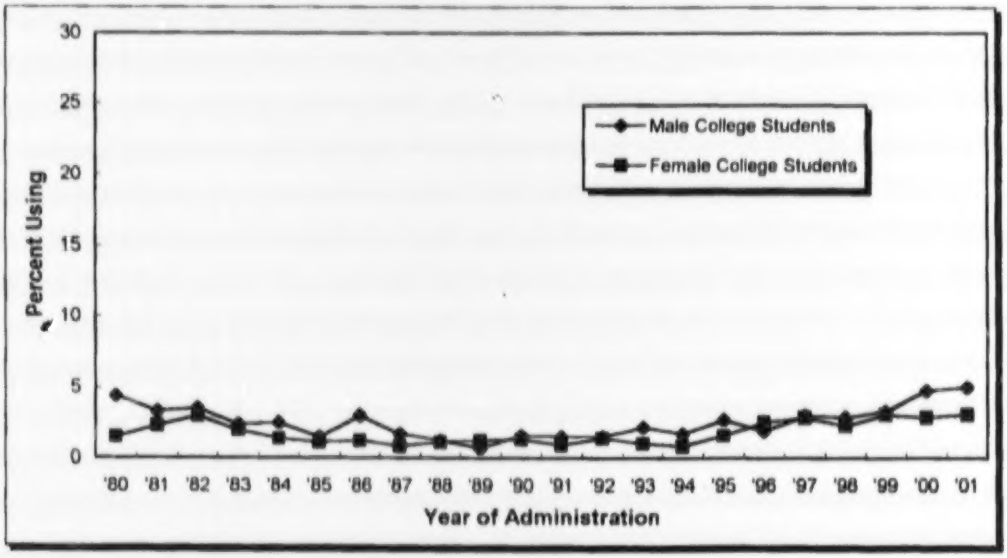


FIGURE 9-12

Barbiturates: Trends in Annual Prevalence Among College Students vs. Others
1-4 Years Beyond High School



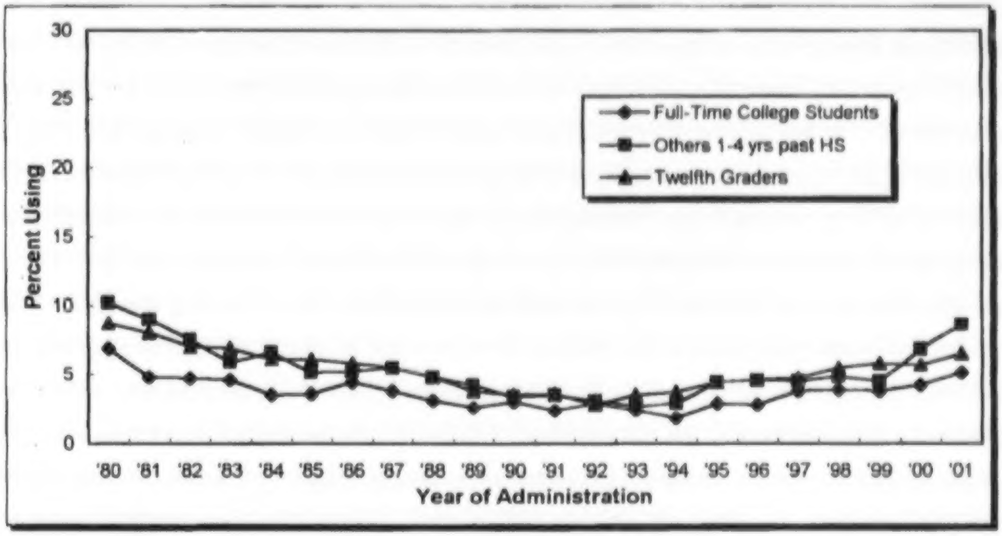
Barbiturates: Trends in Annual Prevalence Among Male vs. Female College Students



241

FIGURE 9-13

Tranquilizers: Trends in Annual Prevalence Among College Students vs. Others
1-4 Years Beyond High School



Tranquilizers: Trends in Annual Prevalence Among Male vs. Female College Students

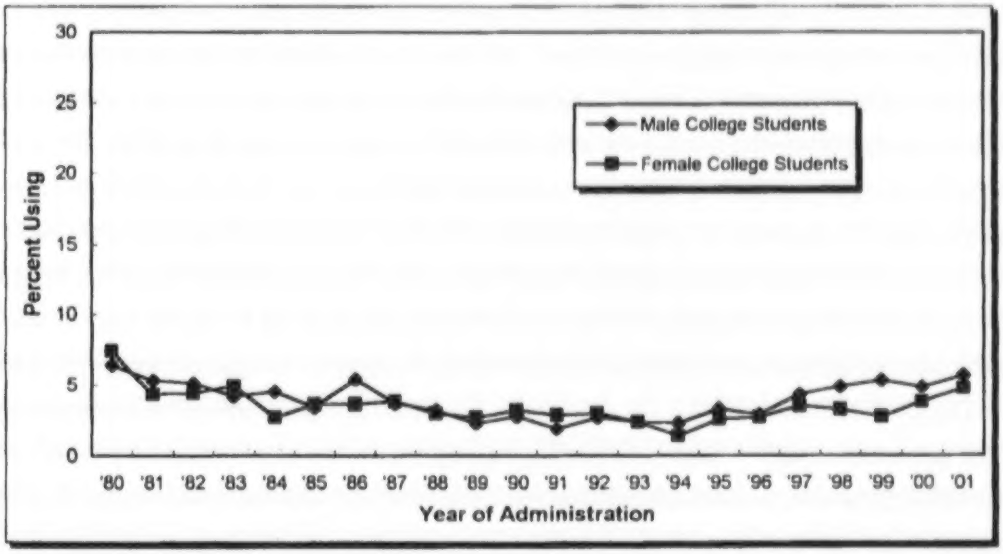
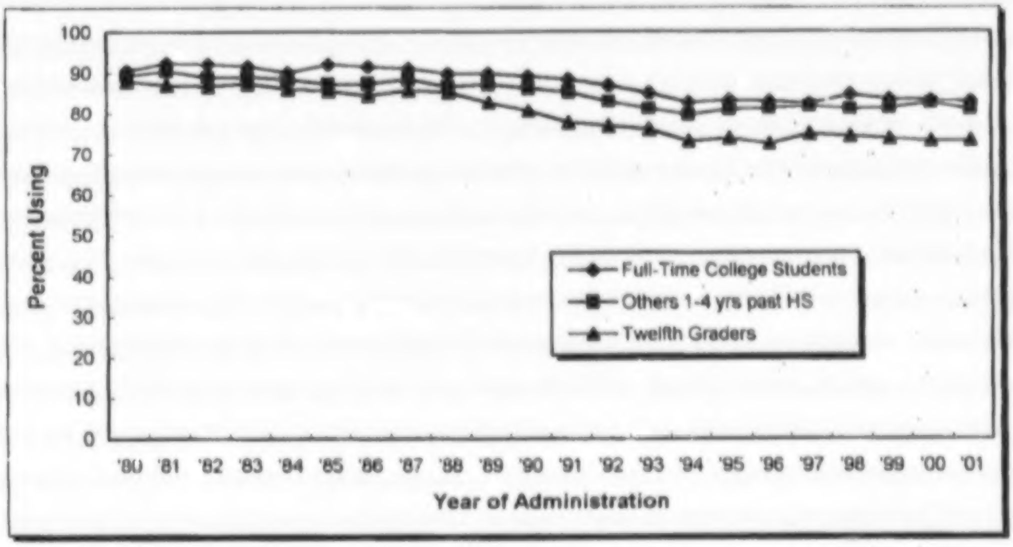


FIGURE 9-14a

Alcohol: Trends in Annual Prevalence
Among College Students vs. Others
1-4 Years Beyond High School



Alcohol: Trends in Annual Prevalence
Among Male vs. Female College Students

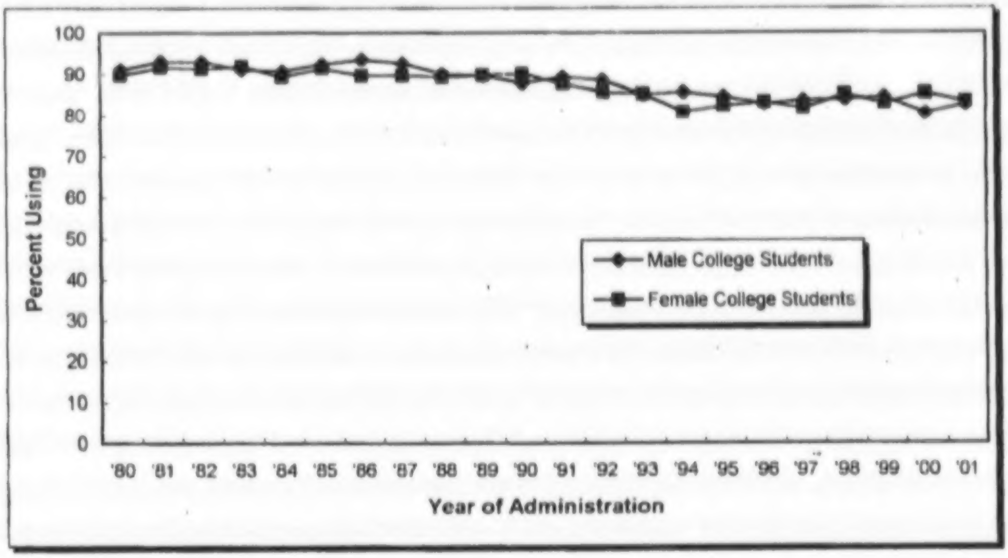
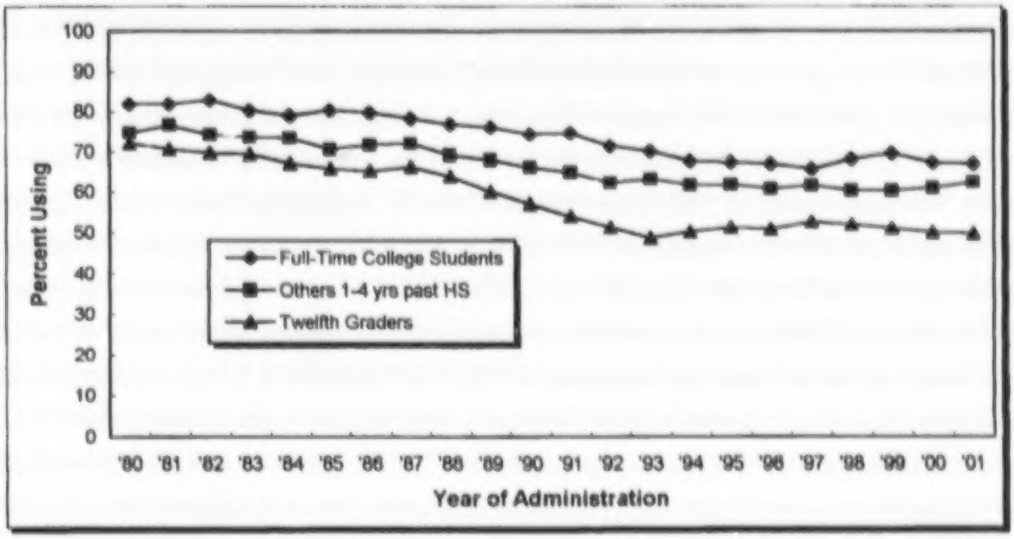


FIGURE 9-14b

Alcohol: Trends in Thirty-Day Prevalence
Among College Students vs. Others
1-4 Years Beyond High School



Alcohol: Trends in Thirty-Day Prevalence
Among Male vs. Female College Students

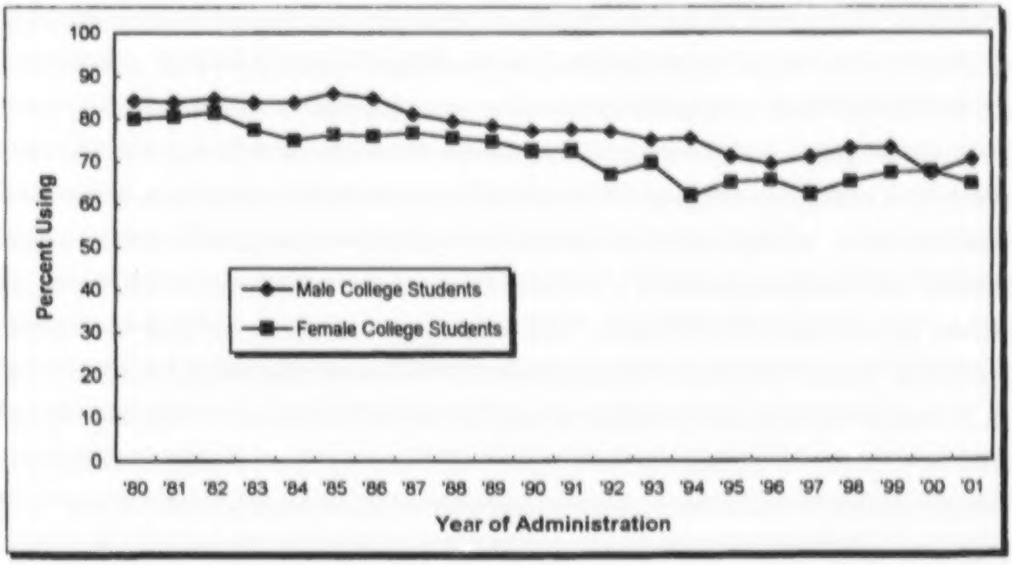
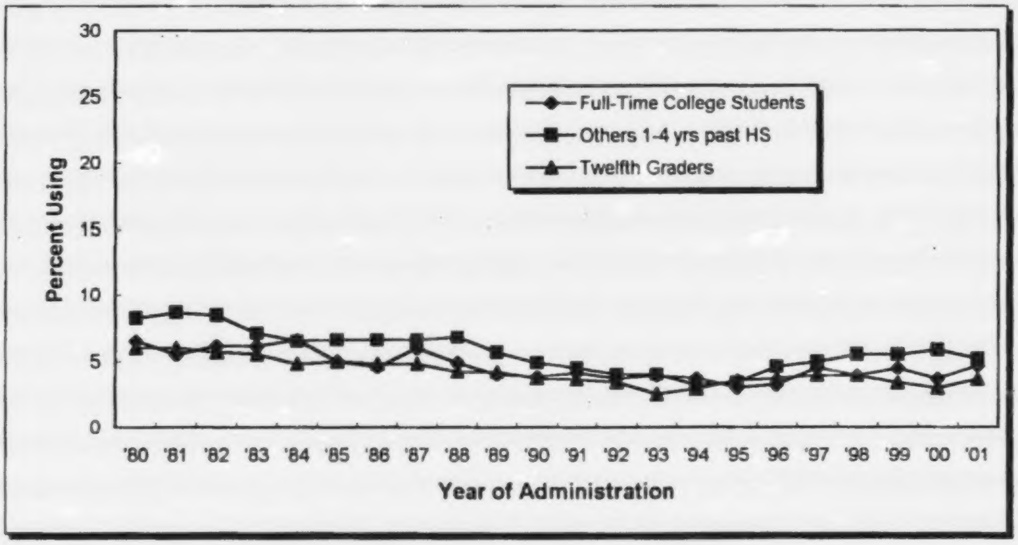


FIGURE 9-14c

Alcohol: Trends in Thirty-Day Prevalence of Daily Use Among College Students vs. Others
1-4 Years Beyond High School



Alcohol: Trends in Thirty-Day Prevalence of Daily Use Among Male vs. Female College Students

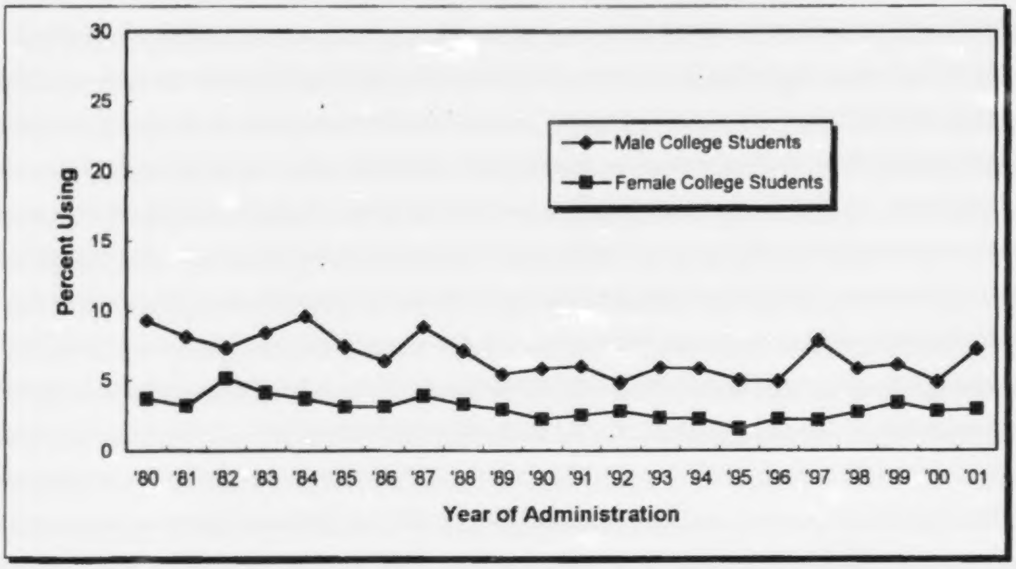
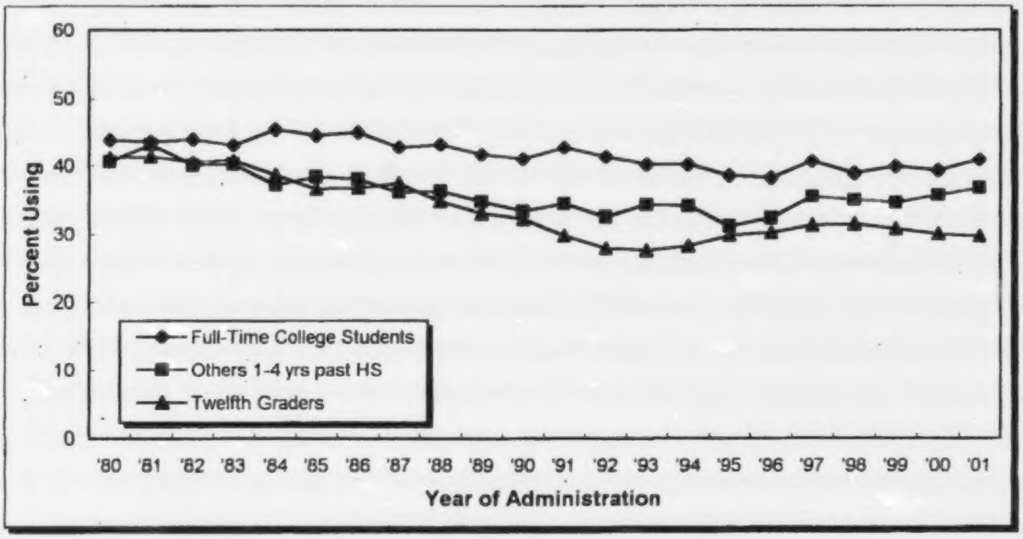


FIGURE 9-14d

Alcohol: Trends in Two-Week Prevalence of Five or More Drinks in a Row Among College Students vs. Others
1-4 Years Beyond High School



Alcohol: Trends in Two-Week Prevalence of Five or More Drinks in a Row Among Male vs. Female College Students

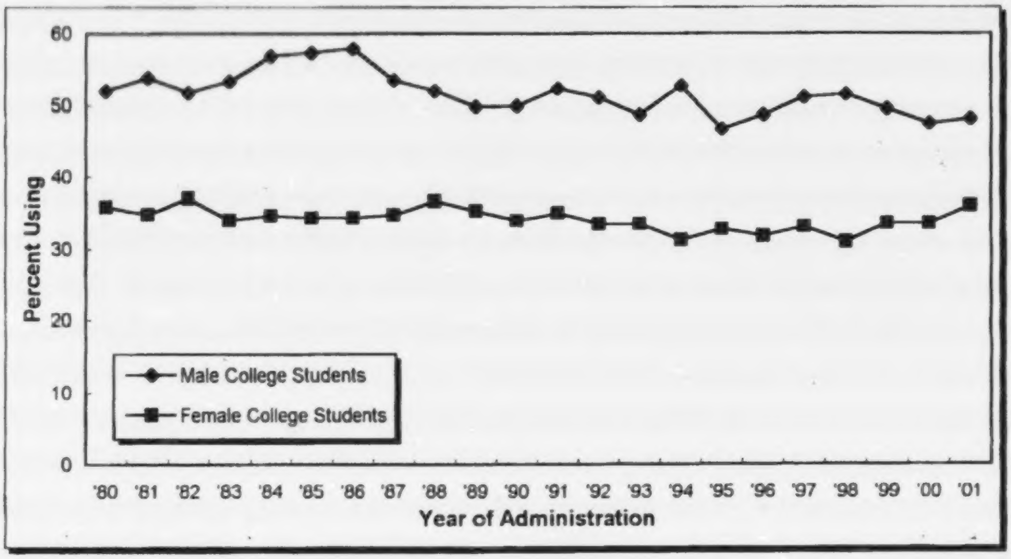
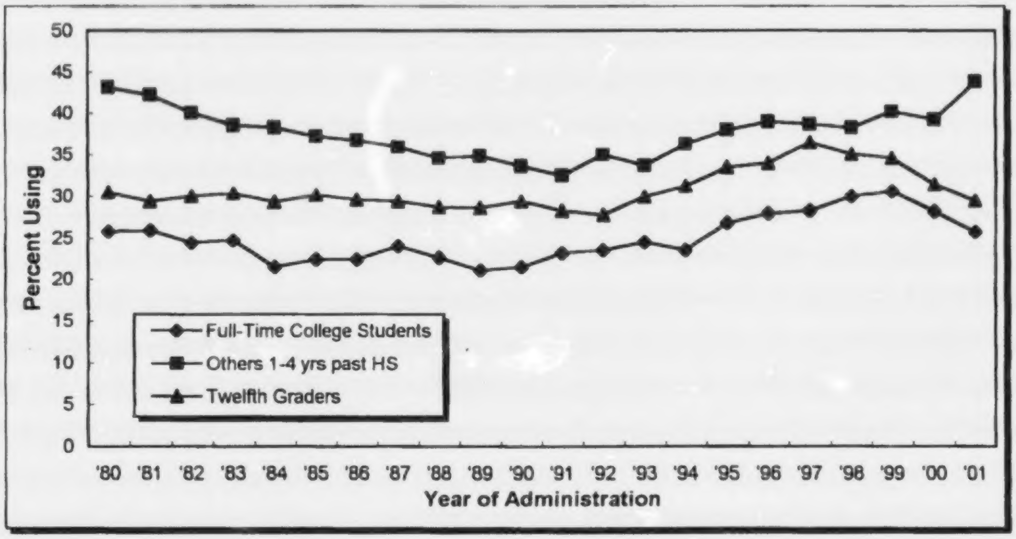


FIGURE 9-15a

Cigarettes: Trends in Thirty-Day Prevalence Among College Students vs. Others
1-4 Years Beyond High School



Cigarettes: Trends in Thirty-Day Prevalence Among Male vs. Female College Students

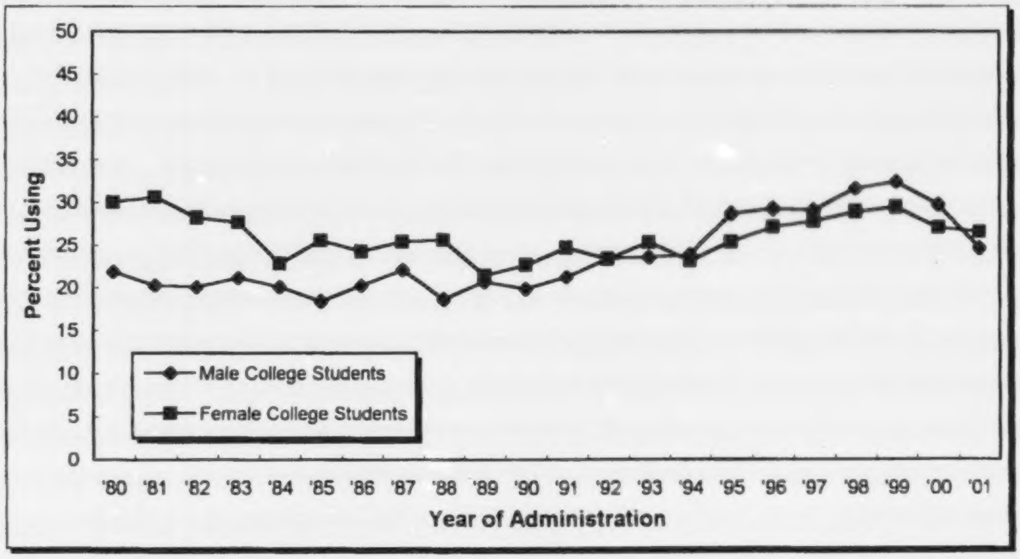
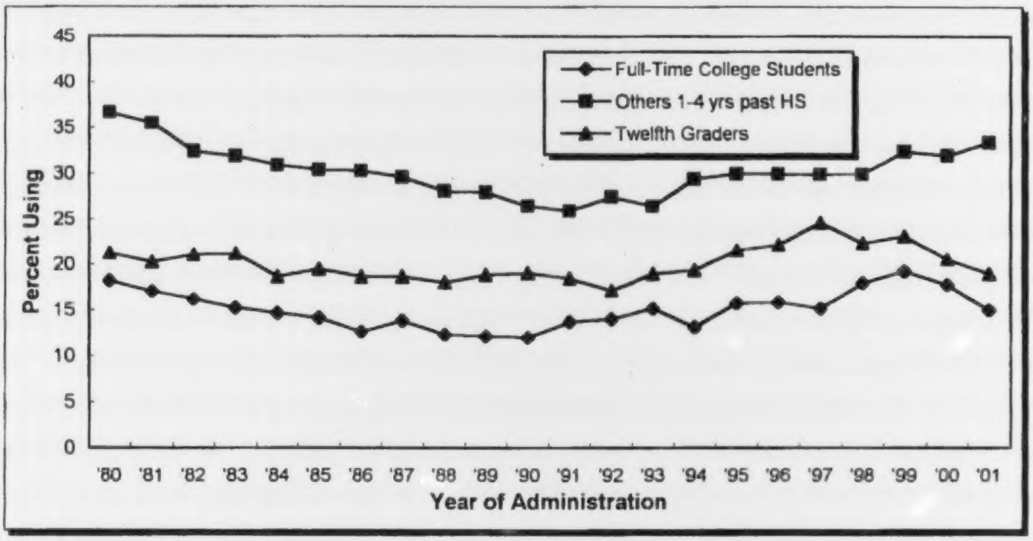


FIGURE 9-15b

Cigarettes: Trends in Thirty-Day Prevalence of Daily Use Among College Students vs. Others
1-4 Years Beyond High School



Cigarettes: Trends in Thirty-Day Prevalence of Daily Use Among Male vs. Female College Students

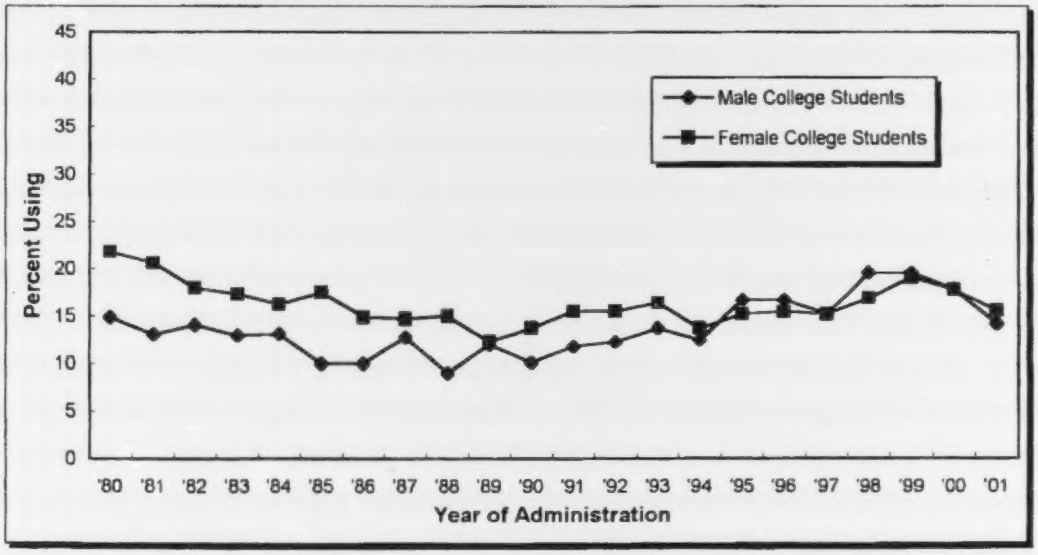
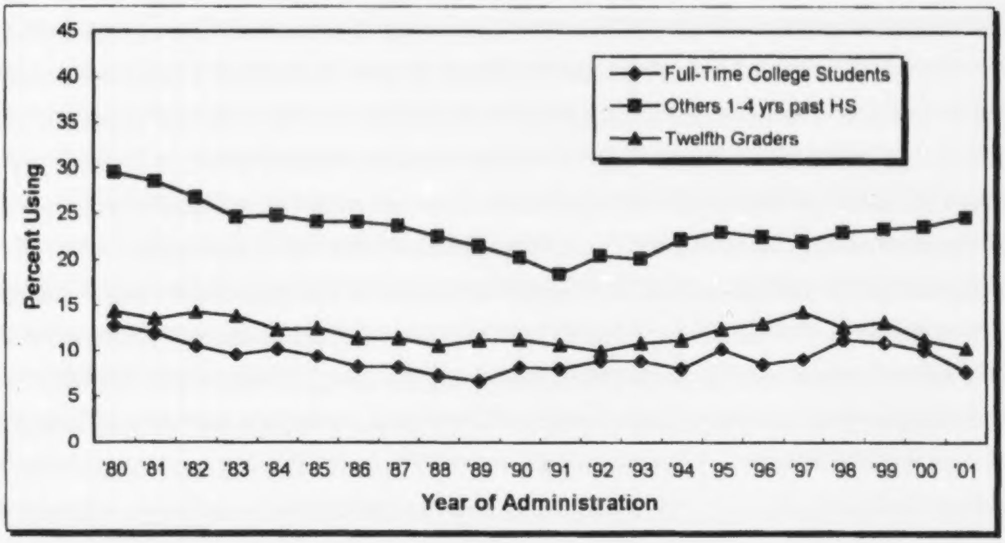


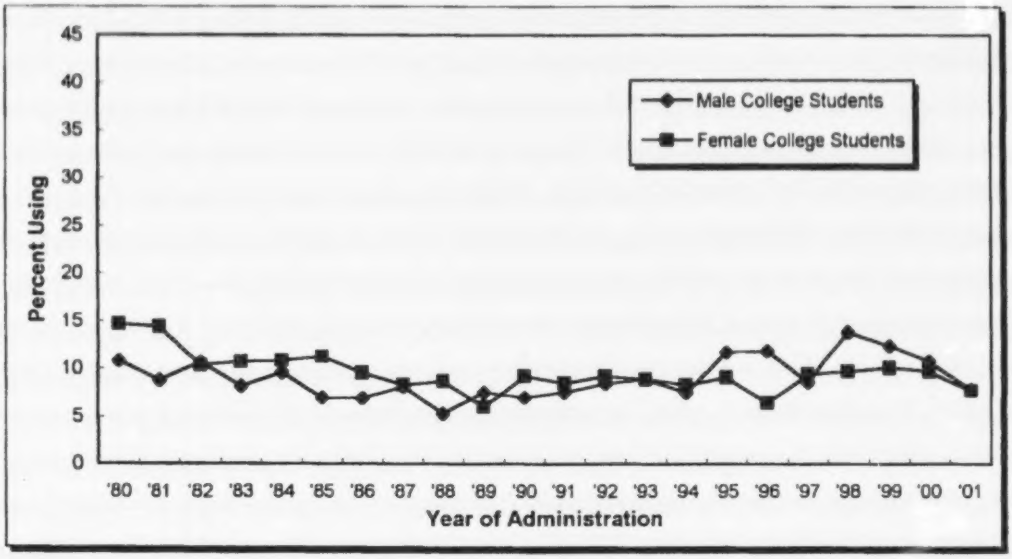
FIGURE 9-15c

Cigarettes: Trends in Thirty-Day Prevalence of Smoking a Half-Pack or More per Day Among College Students vs. Others

1-4 Years Beyond High School



Cigarettes: Trends in Thirty-Day Prevalence of Smoking a Half-Pack or More per Day Among Male vs. Female College Students



NIDA NATIONAL INSTITUTE ON DRUG ABUSE

NIH Publication No. 02-5107
Printed August 2002

250

BEST COPY AVAILABLE

U.S. Department of Education
Office of Educational Research and Improvement (OERI)
National Library of Education (NLE)
Educational Resources Information Center (ERIC)

NOTICE

Reproduction Basis

☒ This document is covered by a signed "Reproduction Release (Blanket)" form (on file within the ERIC system), encompassing all or classes of documents from its source organization and, therefore, does not require a "Specific Document" Release form.

☐ This document is Federally-funded, or carries its own permission to reproduce, or is otherwise in the public domain and, therefore, may be reproduced by ERIC without a signed Reproduction Release form (either "Specific Document" or "Blanket").

EFF-089 (1/2003)